

# ELECTRIC REFRIGERATION NEWS

The business newspaper of the electric refrigeration industry

VOL. I, No. 24

DETROIT, MICHIGAN, AUGUST 31, 1927

Entered as second class matter August 1, 1927, at the Post Office, Detroit, Michigan.

PRICE FIVE CENTS

## NEW MANUFACTURER ON PACIFIC COAST ANNOUNCES PLAN

Refrigeration Company of America Will Start Production of "Ice Queen" Soon

R. M. Burdick, president of the American Engine and Airplane Company, Los Angeles, Calif., announces the organization of a new company to be known as the Refrigeration Company of America, which will shortly start production of complete electric refrigeration units with factory and machine tool capacity for 250 per day. The officials of the new company are: Ralph M. Burdick, president and general manager; C. A. Comp, chief engineer; L. E. VanHise, laboratory engineer; E. S. Adams, sales manager, and O. F. Anderson, purchasing agent.

The factory of the new company will consist of six buildings with two and one-half acres of floor space and having equipment specially designed for electric refrigeration. Every labor-saving device will be employed and all machinery will be direct connected. It is expected that the new plant will be in operation about October 1.

Cabinets for the new unit will be manufactured by the Refrigeration Company of America in their own plant. The boxes will be steel, porcelain lined. Both cabinet and machine will contain a number of new and unusual features. A description of the unit will be found on page twelve of this issue.

Mr. Burdick, who heads the new organization, has designed and manufactured gasoline engines over the past twenty-five years and has devoted a great deal of time to the study of electric refrigeration requirements.

### Frigidaire Week in Oshkosh

The week of August 1 to 6 was set aside as Frigidaire week in Oshkosh by the Domestic Utilities Supply Company, local dealers. Hundreds of women of the I. Markus and sampled foods which she had prepared.

## ASK FOR THE PROSPECT'S NAME AND ADDRESS

This One Cannot Understand Salesman's Lack of Interest

The following letter, addressed to *Printers' Ink* and published in the August 4 issue, calls attention to the possibility that many sales are lost due to a lack of sufficient interest in the prospect.

Chas. H. Cress, secretary and general manager of the Aladdin Utilities Corp., Chicago, writes: "My primary recommendation as to what the manufacturers of electric refrigeration should do to promote consumer acceptance and demand may be summed up as follows:

"The Salesman Didn't Ask My Name and Address"

HARTFORD ADVERTISING CLUB  
Hartford, Conn., July 30, 1927.

Editor of *Printers' Ink*:

Talk about modern sales methods! Here's a yarn for you. A few weeks ago I was interested in automobile refrigerators—interested in all of them—all makes, whether they ran by gas or electricity.

I sent in a coupon to one of the larger manufacturers. In two weeks I received a form letter and a booklet and was referred to the local dealer. I called the dealer, asked the cost of this device, which has recently come on the market, and my question was answered, but the salesman didn't ask my name and address and evidently the dealer never received my name from the manufacturer.

A few days later I called up another local dealer, a representative of one of the largest manufacturers of electrical appliances in the country. I asked what the refrigerator cost and received a courteous reply, but the salesman didn't ask my name and address.

Saddest of all, I actually called at one distributor's office, inspected a certain model, and even on that occasion the salesman didn't ask my name and address.

It seems, in the light of my experiences, that some of our elaborate sales manuals had better be discarded or rewritten and that some one should prepare a treatise on "How to Recognize a Prospect When You See One."

A. W. SPAULDING,  
President.

Leading manufacturers trim their refrigerators with

**Monel metal**  
The International Nickel Co. (Inc.), 67 Wall St., New York City

## Refrigerated Food on Display Attracts Customers and Pays Profits to Waterloo, Iowa, Department Store



SEE PAGE 3 for Additional Illustrations and Detailed Description of Refrigeration Equipment Which Is Bringing Big Returns to the James Black Dry Goods Company's Store in Waterloo, Iowa. The Above Picture Shows Coolers and 46 Feet of Refrigerated Display Counters in the Meat Department.

## A. S. R. E. CALLS MEETING TO CONSIDER PROPOSED NEW YORK SAFETY CODE

H. S. Edwards To Be Chairman of Committee to Redraft Ordinance on Refrigeration

A sectional committee meeting for the consideration of the proposed New York City safety code for mechanical refrigeration was held at the headquarters of the American Engineering Standards Committee in New York City, August 27, under the auspices of the American Society of Refrigeration Engineers.

The following sub-committee was appointed to redraft the proposed code and confer with the municipal authorities with reference to the proposed ordinance regulating the installation and operation of refrigerating machinery.

H. S. Edwards, chief engineer of the Carbide Chemical Co., New York City, was chosen chairman of the committee. The other members chosen were C. C. Spreen, chief engineer, Electric Refrigeration Corporation, Detroit; A. H. Baer, Frick Company, Waynesboro, Pa.; George Lange, chief engineer, American Ice Company, New York City, and C. K. Michaels, fire commissioner, New York City.

## DIRECTOR GENERAL OF SESQUI CENTENNIAL TO DISTRIBUTE KELVINATORS

E. L. Austin, former director-general of the Sesqui-Centennial exposition, is now president of the newly-formed Kelvinator-Philadelphia, Inc. This firm will distribute Kelvinators in Philadelphia, southeastern Pennsylvania, and in southern New Jersey.

A show and salesroom has been opened at 36 South Seventeenth Street, and is the largest for electric refrigerators in the city. On the opening day a large crowd responded to the invitations sent out, as one of the features of the opening was the giving away of a Kelvinator to the person guessing nearest the correct operating cost of the machine for twenty-four hours.

A recording wattmeter had been attached and padlocked to the machine to be given away. An indicating device also recorded the number of times that the refrigerator was opened and closed during this time. It recorded 267 openings and closings that day, but in spite of this, and in spite of the intense heat of the day—the temperature rising to 93 degrees in the afternoon—the cost of operation for the twenty-four-hour period at 3 cents per k.w.h. was only 8.14 cents.

### Thank You

"We like your paper a lot."—L. Calder Smith, general manager, Smith-Anderson Co., Logan, Utah.

## SPECIAL NOTICE SUBSCRIBE NOW

Subscription Rates Will Be Advanced September 15

ELECTRIC REFRIGERATION NEWS has reached the point where it is necessary to advance the subscription rates. Effective September 15, 1927, the price will be increased to \$1.25 per year, or two years for \$2.00. On the same date the club subscription rate will be changed to \$1.00 per year in groups of five, that is, five subscriptions for \$5.00.

Until September 15 you are invited to take advantage of the present low cost, namely \$1.00 per year or three years for \$2.00. Note that the present club subscription rate is only \$0.75 per year in groups of ten, or ten subscriptions for \$7.50.

Manufacturers, distributors and dealers are urged to take action immediately by bringing ELECTRIC REFRIGERATION NEWS to the attention of engineers, salesmen, service men and other members of their organization, and suggesting that they subscribe at once while the low rate is available and in order that they may receive the advantage of this educational news service.

Use the coupon on the last page, or simply write on your letter head, "Enter my subscription. Send bill." Address:

Electric Refrigeration News  
554 Maccabees Bldg.,  
Detroit, Mich.

## GEORGIA POWER COMPANY TO CONDUCT FALL DRIVE

The Georgia Power Company, Atlanta, is making plans for an intensive drive for Fall business during the period beginning Wednesday, September 7, and extending through Saturday, September 24. A special campaign bulletin to be known as the "Frigid-Ometer" will report the progress toward the quota to be established.

Prizes and special gifts will be offered to salesmen and other attractions will be staged to make the event spectacular and resultful.

**Tubing for condensers**  
Smooth. No possibility of scale. Up to 100 foot lengths. Formed to your order.  
1431 Central Ave., Detroit, Mich.  
**WOLVERINE**  
SEAMLESS COPPER AND BRASS TUBING

## 17 REFRIGERATORS AND HIGH SPEED SERVICE TO ATTRACT CUSTOMERS

L. L. Knox Develops Many New Features in Pittsburgh's Newest Restaurant

Seventeen refrigerating units for cooling butter, cream, milk, water and the various foods in the preparation of meals, will be used in the second Herbert's Restaurant, to be opened September 1 on Diamond Street, Pittsburgh, Pa. This restaurant is the very latest development and is the work of the inventive mind of L. L. Knox, of Pittsburgh.

The first floor of the restaurant has semi-elliptical counters against the walls. At the rear of each counter a back bar is used to supply the waitress in charge of each counter with butter, cream, soups, coffee, milk, cool waters, etc. The girl remains within this counter and has only ten customers to serve. The order is transmitted by teletypograph to the basement, and the meal is served within 30 seconds from the time given. Coffee, ice water, warm water are delivered through pipes, and food is furnished by dumbwaiter from the kitchens in the basement.

## FRIGIDAIRE SALES CONTEST ANNOUNCED AT DINNER OF NEW HAVEN BRANCH

The New Haven, Conn., sales branch of the Frigidaire Corporation was host to its dealer-sales organization at a dinner July 27, followed by a convention attended by ninety men. At the convention the price reduction on one of the electric refrigerator models of the corporation was announced, and a national prize contest was launched.

The contest, which closes September 30, is open to every selling man in the entire organization with district prizes, salesmen's and dealers' prizes in both winning and losing districts, and also prizes to supervisors and fieldmen. A special award to be made at the close of the contest is the Kettering award made to each of the three districts showing the greatest percentage of increase in Frigidaire and Delco-Light business during the contest as compared with average performance during the first six months of this year.

## F. S. McNeal Now Sales Manager of Kelvinator of Canada

H. K. Patterson, who has been sales manager of Kelvinator of Canada, Inc., and who has been very active in developing the Canadian market for electric refrigerators over a number of years, has resigned. He will be succeeded by F. S. McNeal who was previously connected with the Leonard organization in the St. Louis district.

## NEW COMMITTEE ON STANDARDIZATION MEETS IN DETROIT

Members Will Ascertain Opinion of Industry on Four Specific Cost-Cutting Moves

On Friday, August 26, the Standing Committee of Simplified Practice appointed at the Cleveland conference of refrigerating interests, July 27, held its first meeting at the office of George B. Bright, refrigerating engineer, Detroit, Mich. Members of the committee are Charles J. Gibson, president, Gibson Refrigerator Co., Greenville, Mich.; C. C. Spreen, chief engineer, Electric Refrigeration Corporation, Detroit; Leslie C. Smith, secretary of National Association of Ice Industries, Chicago, and J. Blair Easter, vice-president Keystone Refrigerating Corp., Beaver Falls, Pa. Mr. Bright was appointed chairman.

The four principal subjects discussed by the committee were as follows: (1) Standardization of dimensions of ice cakes and cuts; (2) standardization and reduction in variety of size and location of hanger bolts; (3) standardization of size and location of tubing entrance holes; (4) standardization and reduction in variety of widths of cabinets in domestic sizes.

Discussion on these subjects resulted in the decision of the committee that each member will ascertain from the branch of the industry which he represents the opinion of that branch in regard to these subjects, and will ask for further suggestions and information for the guidance of the committee. As soon as this information is collected, a second meeting will be called for the committee to study in greater detail the specific suggestions made by those concerned.

## Chicago Firm to Manufacture the "Snow Queen"

The Hvid Machine Corporation, First National Bank Building, Chicago, of which Lawrence E. Abt is president, and R. M. Hvid is vice-president, has begun the manufacture of a household electric refrigerator, the Snow Queen, which uses methyl chloride as the refrigerant.

## CONVINCE PUBLIC THAT INDUSTRY WILL STAY PUT

Show There Is No Reason To Expect Radical Changes in Design

Chas. H. Cress, secretary and general manager of the Aladdin Utilities Corp., Chicago, writes: "My primary recommendation as to what the manufacturers of electric refrigeration should do to promote consumer acceptance and demand may be summed up as follows:

"Convince the general public that the electric refrigeration industry as now established is going to stay put; that no radical changes in design or price are possible; that no one need fear the Henry Ford of refrigeration will revolutionize the industry and furnish electric refrigeration at a price which will make present prices ridiculous or will develop some entirely new thought which will make obsolete over night the hundreds of thousands of units which are now giving satisfaction.

"I have tried to give in a paragraph the conclusions which I have arrived at after a year of active work in refrigeration, during which time we have sold nearly a million dollars' worth of Zerozones in the Chicago district alone."

## Kingsbury Surveys Southern Market

Gordon W. Kingsbury, director of advertising of the Electric Refrigeration Corporation, has recently returned from an extended trip covering the principal cities of the South and Southwest. He reports favorable business conditions in this part of the country, including the district devastated by the recent flood.

## Sanat Refrigerating Company in Bankruptcy

The Sanat Refrigerating Company, 331 Madison Avenue, New York, has filed a voluntary petition in bankruptcy showing liabilities of \$42,396 and assets of \$16,566. Isaac Siegel was appointed receiver on August 6.

An Outstanding Sales Feature for REFRIGERATORS

**AIRTITE**  
WIPES PATENTED  
CUSHION  
GASKET



# Absopure

## FRIGERATOR

# Attention Distributors!

Our line of Electric Refrigeration is as complete, if not more so, than that of any manufacturer in the country. Refrigeration for the smallest bungalow to the largest apartment—from an office water cooler to every type of commercial installation.

Our price range is as low as the lowest and in many cases slightly under. An Absopure Dealer has a line of Electric Refrigeration so complete that he can fill every refrigeration requirement with splendid profit for his investment of time and money.

We manufacture in our own plants our complete units as well as a full line of metal refrigerator cabinets.

We have had twenty-five years of refrigeration experience and know what the user of ice requires to take its place.

Absopure Frigerator is a division of the General Necessities Corporation, around which revolves the activities of a \$10,000,000 group of industries. Here are inspired the high standards of engineering, of manufacturing and of distribution which have earned for the Absopure Frigerator a place in the forefront of the Electric Refrigeration Industry.

*We invite correspondence from individuals  
or companies of responsibility.*

In All the World There Is Nothing Better  
Than Absopure

# Absopure

## FRIGERATOR

A DIVISION of GENERAL NECESSITIES CORPORATION

DAVID A. BROWN, President

General Necessities Building •• Detroit, Michigan



# Department Store Meat Sales Doubled By Effective Use of Complete Electric Refrigeration Equipment

Management of Waterloo, Iowa, Store Says "Quality Merchandise, Electric Refrigeration and Up-to-the-Minute Display Are Essential to Success"

By G. M. Johnson



Northy Special "Isetop" Counters in the Delicatessen Department of the James Black Dry Goods Company.

In 1912, when Waterloo, Iowa, had a population of about 26,000, the James Black Dry Goods Company built the building here shown. The basement, together with the first, second, third, fourth, and portions of the fifth and seventh floors, were devoted to merchandising, the remainder being rented for other uses, mostly offices.

## Electric Refrigeration from the Start

The meat and grocery section, in the basement, was provided at first with a Northy cooler, 14' x 34', a 22' Isetop display counter for meats and a small cooler for dairy products. Refrigeration was supplied by an electrically driven, manually controlled ammonia machine. The large cooler and counter were served by direct expansion.

A brine cooling and circulating system, in connection with the above compressor, gave service for the dairy cooler and also for two refrigerators in a kitchen on the mezzanine floor, besides an adjoining soda fountain. Brine lines were run up a convenient elevator shaft.

Later a tea room was established on the eighth floor, and this has been enlarged until about three-fourths of the space is given over to kitchen and dining-rooms. Here as elsewhere in the building, electric refrigeration has always been depended upon to keep foodstuffs in perfect condition.

## Original Plant Outgrown—What to Do?

Two years ago extensive changes in all of these departments were rendered imperative by increased volume of business. The question then arose as to whether existing facilities could be adapted to serve acceptably, at a nominal first cost, or whether a much greater investment would justify itself. Neither of the two machines then in use were automatic, and this fact left much to be desired, especially over Sundays and when a Sunday and a holiday came on successive days. Larger receiving facilities were needed, with refrigeration for bulk storage.

It was decided that a complete new outfit be installed for exclusive retail use in the basement. The cooler selected is a side icer, with a frontage of 36' x 10' deep, with extra heavy mineral wool insulated walls, and is fitted with York brine tubes. Three main doors give access to the interior, which is divided into separate rooms. Seven retail windows in front open conveniently for cutters' use. An Isetop display coun-

In the business sections of large cities, that time is long since past when expensiveness of housing and equipment meant permanence, or even long continued use. It is common indeed to see concrete and steel, granite and marble, bronze, mahogany and tile give way, either wholly or in part, after a couple of years, to the demand for increased facilities. But in smaller towns of normal growth, such construction is usually planned to serve during a business lifetime.

This article deals with a city store in a country town. A store that outgrew its refrigerating equipment within ten years and bids fair to outgrow it again in even less time. This smacks of a commonplace of the big city. In a small city, not of the "boom" order, it is novel. It stiffens the civic pride of the community. It should be, and doubtless is, a cause for self-congratulation to its owners.

ter parallels front of cooler for thirty feet. This is the largest single section of such counter ever built. Adjoining at a right angle is another similar counter sixteen feet long, making a total of 46 lineal feet and a display surface of some 110 square feet.

Ammonia service is by a York, 5 x 5 twin cylinder, vertical, single acting compressor, located behind cooler. The gas is expanded first into counters, the coils of which are semi-flooded, thence it tails off into cooler and back to compressor.

## Conducting Heat Downward

These counters, built under the Burrows patents, are provided with a shallow pan covering the top and extending the full inside width and length. The pan contains sweet water about three inches deep and in this a flat expansion coil is immersed. Surrounding the pan on sides and bottom is heavy corkboard insulation. An enclosure of single plate glass, with sliding service doors, is provided.

The construction of the Burrows coil is such that the three-inch depth of water is rapidly converted into ice, forming a solid sheet. About two inches above this ice sheet, angle bars are located front and back for the support of metal grids. These grids carry a sufficient number of Vollmer enamelware meat platters to completely obscure the ice from view. The sectional cut, however, does not show the full length platters, but instead, has a space in the rear where narrow containers are placed directly upon the ice.



The First Store of James Black Dry Goods Co., Occupying One Small Room in 1892

Merchandise is kept cold by conduction through platters, grids, grid-angles and pan, all of which are in contact. Then too, practice has shown that more heat is absorbed by convection than might be supposed. It has been found that the air directly over ice becomes so cold that, if desired, wooden slats may replace the metal grids with satisfactory results. It was necessary, in fact, to elevate platters sufficiently to prevent their contents from freezing to the enamelware.

## Visibility of Merchandise

It will be noted that the idea of locating a cooling agent beneath the objects to be



The Present Building of the James Black Dry Goods Company. Thirty-five Years of Merchandising Experience Are Back of This Establishment in Waterloo, Iowa. From Small Beginnings in 1892 the Store Has Moved Four Times, Each Time to a Larger Building. Refrigeration Equipment of Ten Tons Capacity Is Used to Protect Food Served and Sold Over the Counters of the Store.

cooled is contrary to the usual practice, which relies mainly upon air circulation. But in this way it is possible to display choice cuts of every description and to present an unobstructed view, from both front and rear.

This design serves a distinct need not fully taken care of where an air circulating system is used, because in the latter much valuable display space must be given over to some form of heat absorption unit. Rapid turnover, secured by 100 per cent display, is of first importance in a busy store. Short time refrigeration is all that was originally intended. In fact, early counters of this type were built without top protection except for a glass shield in front. The complete enclosure is chiefly for sanitary reasons.

Ten feet of counter is used for delicatessen. The remaining six feet of the shorter unit is of somewhat different top construction, having sliding doors in front as well as in the rear. This enables customers to serve themselves with milk, cream, butter and other package goods.

It was feared at first that this single glass enclosure would steam or sweat on the outside. Practice, however, has proved this fear to be without cause, except upon rare occasions of extreme humidity. At such times steam may form over the lower part of the front glass, but this is far less objectionable than is extra glass and the necessary extra supports, which tend to defeat the primary object of visibility.

## The Psychology of Quality

The fronts of both cooler and counters are finished in Italian white polished marble, trimmed with a green marble called verd-antique. This relatively expensive finish was used to emphasize the idea of quality goods.

If quality goods well displayed are half sold, the axiom is proved here. No one, be his appetite ever so jaded, can walk the length of this beautiful display of chilled delicacies without receiving a silent suggestion for some toothsome, but forgotten dish—an inspiration which probably would not otherwise have presented itself to the mind's eye.

## Astonishing Results

Department Manager Frank L. King says: "Sales have more than doubled since our present type of display has been in use. However, it would be unfair to say that such success as we have had is owing to any one thing. We find great value in

many things and all are essential.

"For instance, I am a regular subscriber to probably twenty-five magazines, mostly of the kind read by women, or those treating of foodstuffs in one way or another. Columns devoted to cooking and the like usually feature menus calling for seasonable items in our line. I study and remove the advertising pages for further ideas, lest in linking up our local advertising with that of a National character, some item be overlooked.

"To show the importance I attach to this, I am spending about \$300 for a file where all such material may be kept for instant reference in my own home.

"After reasonable advertising of the right sort, comes the necessity for having the advertised goods on hand in sufficient quantity. Quantity stocks of perishables call for proper refrigeration. Rapid turnover is difficult and expensive unless customers are able to see for themselves that the desired article is in stock, for it is impossible to give each patron absolutely instant attention at all times. I am convinced that our facilities for refrigerated display are unsurpassed at the present time. In forming this opinion I have looked much farther than the confines of our own store.

"Recently Mrs. King and I traveled to Vancouver, Los Angeles, El Paso and Kansas City, stopping at a score of important cities en route. We covered about 14,000 miles, and store methods and appliances formed one of the chief objectives of the trip. I learned much by way of improving our own methods; but I can truthfully say that I shall have to look still farther for more result-getting equipment than ours."

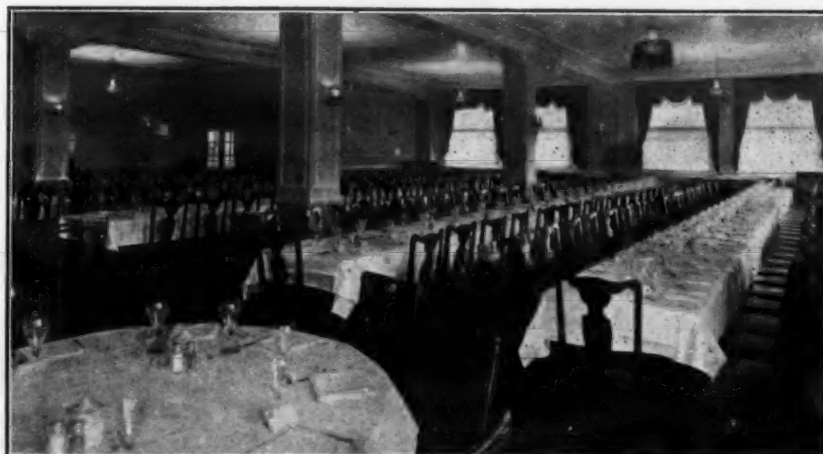
## Receiving Department

Next came the fitting up of the old 14 x 34 cooler for use in an entirely new department, devoted to storage purposes. This is in a new basement connected by tunnel underneath a public alley, and inasmuch as it is some 200 feet distant from the retail section, separate refrigerating plant was advised. This consists of a 2½ ton Creamery Package Ammonia compressor, the cooler being fitted with York brine tubes. The storage space is divided into three rooms, each with its own entrance and containing, respectively, meats, poultry and fruits at suitable temperatures for each. Means are at hand for further raising or lowering these temperatures separately.

(Continued on Page 4)



One Corner of Black Tea Room, Eighth Floor



One Corner of the Tea Room Arranged for a Banquet



## COMPLETE ELECTRIC REFRIGERATION USED IN DEPARTMENT STORE

Attractive Display Counters Showing Refrigerated Food Appeals to Customers

(Continued from Page 3)

### Luncheonette

The kitchen on balcony floor is provided with an overhead cooler, 8 x 3½ x 9. On account of lack of room elsewhere, the Isko Model 200 machine was located on top of refrigerator.

This system uses sulphur dioxide, which is first expanded in a coil underneath the syrup pumps of the soda fountain in a compartment filled with sweet water. The result is that there is at all times a considerable mass of ice extending the 14-ft. length of the soda fountain. This serves as a hold-over to keep syrups in condition whenever the automatic machine is not in operation. After this the gas passes through a coil in the soda back-bar and thence to the kitchen cooler.

Seating capacity here is about one hundred. In the preparation and serving of food and drink, twenty persons are regularly employed, but often this force is increased. It is an interesting fact that this activity is the rule rather than the exception, and this department caters largely to pre-luncheon and mid-afternoon demands; though the peak is reached at regular meal hours.

### The Tea Room

The view from the eighth floor tea room, embracing as it does the beautiful Cedar River valley, adds much to the cheer of its restful and well chosen appointments. The



Frank L. King, Department Manager, James Black Co., Waterloo, Iowa, a keen merchandiser who is enthusiastic in his praise of electric refrigeration as a selling help.

a town of less than 40,000, which has many fine restaurants. Not the least of these reasons is controlled temperature. Ice cream is served, both here and on the balcony, from Nizer cabinets. There is a kitchen cooler identical with the one already described, and also another overhead cooler, 5 x 11 x 11 in size. These two are served by a one-ton York automatic ammonia machine, located in the workshop and tank loft above.

### Refrigerants Used

The engineer of the building, William W. Hartleip, finds that ammonia and sulphur dioxide each have certain merits peculiar to itself, and that proper recognition of this consists in choosing whichever is better suited to conditions.

Boiler capacity would permit of electric

## Black Store Equipment Furnished by Five Manufacturers

In this article describing the refrigerating facilities of the James Black Dry Goods Company of Waterloo, Iowa, will be found a detailed description of a variety of equipment, including coolers and machines furnished by Northey, York, Creamery Package, Isko and Nizer. The machine capacity used in the store totals approximately ten tons.

## Ft. Atkinson Company Makes Rapid Progress

The Jefferson County Electric Company, Frigidaire dealers in Fort Atkinson, Wis., celebrated their first anniversary August 8. In the past year the personnel of the company has increased from two to eight.

Quarters at 10 North Main street were occupied by the company, and by the middle of the year it was necessary to secure additional space next door. The Jefferson County Electric Company, together with the Rock, Dane and Green County Electric Companies, are associated in one district under the general supervision of one manager. Each company maintains its own sales and office organization, however, A. M. Ryser being the manager for the local company.

## Springfield, Mass., Utility Business Growing

The United Electric Light Co., Springfield, Mass., shows in a recent report substantial increases in the volume of electric current sold for domestic uses, a considerable portion of which is due to more general use of electric refrigeration. The company will shortly award a contract for a three-story addition, 60x55 feet, to cost \$125,000, to increase its office space.

## An E.T.L. Service for REFRIGERATORS

### Private Laboratories for Experimentation

Several important inventions have been developed in the privacy of the well equipped individual laboratories at E.T.L. These are available for rental

### Tests for Information or for Data of Record

Chemical, mechanical and electrical tests of units and parts may be carried on with adequately manned, modern test and research facilities, either by the experimenter or the E.T.L. staff

### Specifications

Technicians in many fields, comprehensive experience and library facilities make E.T.L. also the place to develop performance specifications. These are available to the refrigeration industry at —

KNOW  
—by Test

Electrical Testing Laboratories  
80th Street and East End Ave.  
New York N.Y.

Thirty years in the Service of the Electrical Industry.

# HIBBARD ELECTRIC BOTTLED BEVERAGE CABINETS

A MONEY-MAKER for the POWER COMPANY—the BOTTLER and the RETAILER

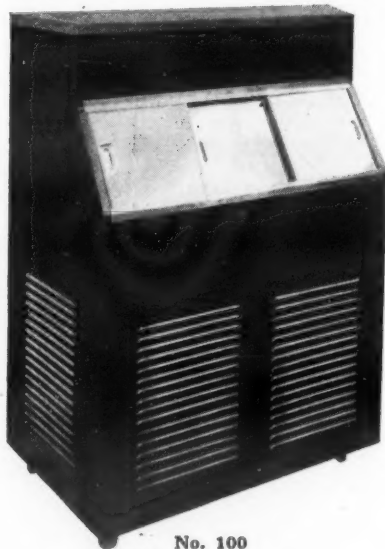
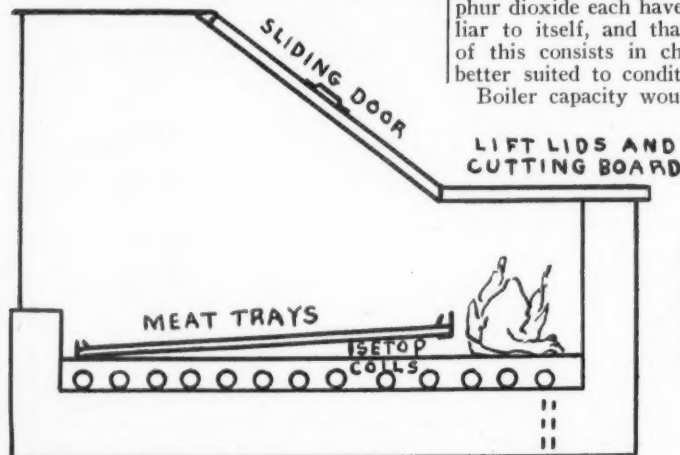


Diagram Showing Sectional View of Refrigerated Counter



food is from a kitchen which, although large, is frequently taxed to capacity, five hundred persons often being served at one time without crowding.

Four private dining rooms occupy one corner of the floor, which formerly was leased for offices. By a clever arrangement of narrow, hinged glass doors, ceiling high, these four rooms may be thrown into one. The floor is of polished hardwood, as is that of a large lobby adjoining. The latter connects also with the main dining room, which is carpeted. For special uses, therefore, the whole is transformed into one vast room. The portion which is not carpeted permits of catering to dinner dance affairs. Of these and of banquets there is a constant succession.

Men's noonday luncheon clubs, eleven in number, meet weekly here. At all seasons there is the usual grist of wedding breakfasts and dinners, afternoon teas and afternoon and evening bridge clubs, to supplement the customary run of patronage. From six to eight such affairs often are in progress at once, without conflicting in any way with the usual service or with each other.

### Where Ice by Wire Is Indispensable

Good reasons exist for such popularity in

generating machinery being used, but central station power is relied upon nevertheless. In addition to a varied assortment of motors and the usual lighting load, there is the power requirement for about ten tons of refrigeration and seven elevators. The private substation is fed from underground mains. There are, in effect, three separate circuits. That used to drive the D. C. converters is primary current of 4,000 volts potential, the other two being 220 volts, 3-phase, and 3-wire, single-phase, respectively.

### In General

All the coolers, comprising some 7,500 cubic feet, as well as the refrigerated display counters, are of Northey build. The ammonia equipment was installed by local engineers of what is now the Allan Ice Machine Company of Omaha. Since the store is not provided with ice-making equipment, manufactured ice is purchased daily for use at tables and fountain. At this season the amount ranges to upward of one-half ton. This rather startling quantity is evidence that the management tolerates no stint in a matter that might be held to be debatable. Increasing patronage shows public approval. That new facilities procure still further evidence of support is proof of the satisfaction of the owners.

Hibbard Cabinets bring to the Bottler an opportunity to treble his trade through serving drinks palatable, really cold, and sanitary. An insipid, half-cooled beverage does not invite a second call.

Being electrically operated, these cabinets only can supply the unvarying, dry chill essential to building up the Bottling industry into large figures, through increased retail consumption.

And the Power Company reaps their share of the harvest. The daily load on a Hibbard Cabinet varies from 3 to 10 kwh. per cabinet.

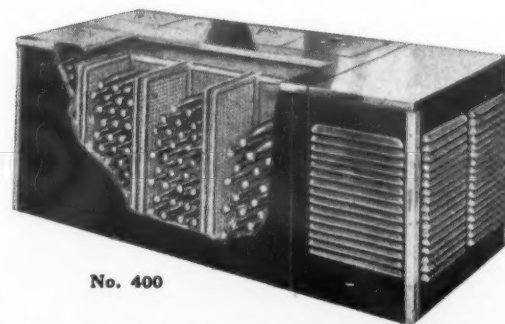
We have in operation in many localities a plan whereby the Bottler and the Power Company work together with the retailer, to their mutual profit.

The Coupon below, mailed to us, will bring you full details.

Hibbard Cabinets Are Sold by Leading Power and Light Companies Everywhere



No. 100  
Capacity 100 bottles—59" long, 31" wide, 30" deep



No. 400  
Capacity 400 bottles—72½" long, 24½" wide, 30" deep.

Capacity 250 bottles and two 5-gal. cans of ice cream—73½" long, 22¼" wide, 30" deep

Patents Issued and Pending on All Models

## THE HIBBARD COMPANY

HIBBARD BLDG.  
CLEVELAND, OHIO

THE HIBBARD CO.,  
Hibbard Bldg., Cleveland, O.

Please mail complete data on HIBBARD CABINETS.

Name .....

Address .....

City ..... State .....

## Protecting Reputations

The leading manufacturers of electric refrigerators use Novoid Corkboard to insulate their equipment. Since reputations depend on operating efficiency only the finest sort of insulation meets their requirements. They find Novoid Corkboard high in insulating value, easy and economical to use, and uniform in quality. Perhaps you, too, can make effective use of this high grade corkboard. May we send you a sample and a copy of Bulletin 271-E?



## Novoid Corkboard Insulation

CORK IMPORT CORPORATION  
345 W. 40TH ST. NEW YORK

"Permanent Protection for All Refrigeration"

ATLANTA BOSTON BUFFALO CHICAGO PHILADELPHIA ST. LOUIS

## TUBING DROP IS UNNECESSARY

But this is only one advantage of the multiple control system made by this pioneer manufacturer, The Electro-Kold Corporation, Spokane, Washington, U. S. A.

## ELECTRO-KOLD

The Simplest Electric Refrigeration  
Trade Mark Reg. U. S. Pat. Off.



## Los Angeles Home Furnisher Reduces Sales Resistance by Selling Two Makes of Electric Refrigerators

By H. L. Coffin



A corner in the Model Home of Barker Brothers, Los Angeles, California

The Electrical Refrigeration Department of Barker Brothers, the Los Angeles store which is a "Complete Furnisher of Better Homes," has doubled its sales this year by putting in two kinds of electric refrigerators. As this store was the pioneer of the Pacific Coast in selling electric refrigerators, it began when it opened this department six years ago to feature the oldest satisfactory unit then offered on the market. And since this department is still in the lead of its competitors in volume of sales and in service rendered to customers, it has added what it considers the best of the newer units to its stock.

### Two Chances to Make a Sale

Edward L. Glancy is sales manager of this department, and told me that this policy had actually doubled the sales. "It gives the salesmen two chances to win," he said. "Both machines are excellent, thoroughly dependable, do what they promise they will, and each one has its following. The national magazine advertising put out by both manufacturers has educated the public to the convenience, economy, wholesomeness, and other advantages of electrical refrigeration and some people are sold to one machine and some to the other. It is a matter largely of which advertisements happen to come to their notice, I think, for there is little choice between the two refrigerators. This company is now beyond the experimental, introductory stage. Most people know what this modern 'ice box' is and want one. There are a good many different kinds on the market and the competition is keen. What the salesman has to do is to persuade the customer to buy his particular kind. If he has two kinds he doubles his arguments and, of course, his chance of sales.

"Each manufacturer puts out his own line of 'selling talk.' We don't pay much attention to that. Each of our salesmen works out his own method. It is a policy of Barker Brothers to develop initiative in all their employees, and it is, of course, also the policy of this department. We have four salesmen. Each one works in the department, 'on the floor' as we say, one day each week. The rest of the time is his own, to follow his leads, make his follow-up calls, develop new territory, or whatever he likes.

"The department gets leads from the building permits, inquiries by mail and persons on the floor, and also from the other departments in the store. These are divided pro rata among the salesmen, and they also have their own ways of hearing of prospects. Each man works on a straight commission, no salary, basis. We also give commissions to salesmen in other departments who bring us customers. Barker Brothers being wholly a home furnishing store, the buyers in any department may be potential electric refrigerator buyers. But unless there was some incentive, the salesman in another department might not feel it worth while to send them on to us, or suggest that an electric refrigerator be needed in the home. So we pay a commission on all sales made from leads given by clerks throughout the store.

### Present Low Prices Help Sales

"Prices are down now considerably on these units, compared with what they were when we first started, and that helps increase the number of sales. We carry complete outfits costing from \$225 up to \$1,400. They can be had in various sizes to fit particular spaces, can be built into the refrigerator one already owns, or can be made to order. It is not necessary that they be built into the house, although there are many in the new homes and apartments. People who live in rented houses can have their electric refrigerators now,

just as they have their washing machines, and move them into new quarters whenever they like. We make buying easy on the installment plan, according to the generous credit policy of the store.

"One popular feature of our department is that we keep the refrigerator in repair as long as the buyer owns it. After a stated period we make a slight charge for this service, but the customer is always glad to pay and he seems to appreciate the fact that he can come back any time to the place where he bought his unit and get it fixed. The repairs needed are seldom more than simple matters of adjustment, for these machines are nearly perfect mechanically and will wear a lifetime. And they are as convenient, as easy for anybody to work as any other electrical contrivance. All you have to do is attach the cord and stick in the plug and the unit does the rest. The current to run it costs about half what the iceman's bill would be. There is less dirt, less care needed, less fuss and trouble generally, and there is better kept food, more sanitary and delicious, and endless opportunities to put fancy touches on salads and ices and other desserts. No wonder everybody wants an electric refrigerator.

"We have practically no lectures or demonstrations. We always have the units running in the department, and they are on exhibition in Barker's Brothers Model Home. They are frequently featured in the window displays and in the house magazine, 'Better Homes—Modes and Manners,' which is issued six times a year. Our department also uses considerable newspaper advertising and has its folders and announcements. And, of course, we are furnished with a good many publicity folders and so on by the manufacturers of the two units we carry. We benefit by the extensive national advertising that they do.

"We find that this commodity is already sold to the customer in that he knows its value and wants one if and when he can afford it. Our business is to smooth the way so that he can satisfy that want and do it now, without waiting, and do it with one of the units we carry."

### Wins Prize Served in Ad-Writing Contest

The Power Plant Engineering Co., Portland, Ore., distributors of Servel refrigerators, has recently conducted an ad-writing contest for amateurs. The first prize, a \$265 Servel, was won by Mrs. H. P. Edward. New viewpoints on electric refrigeration were brought out by many of the advertisements submitted.

### Seattle Installations Reported

Recent installations of Electro-Kold in Seattle include the Tip-Top Inn, A. Anderson's grocery and meat market, and Gloor's restaurant.

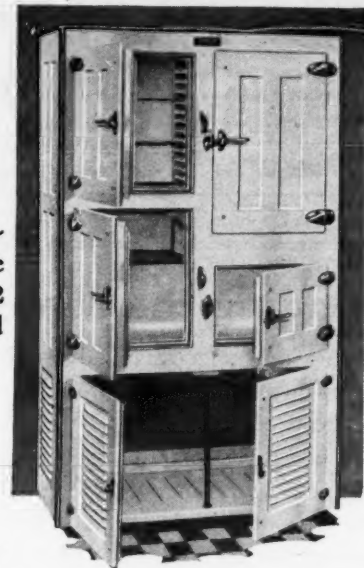
Ice cream delivery trucks have had Frigidaire units installed by several leading ice cream manufacturers of Seattle. Ice cream cabinets have been sold to manufacturers, who in turn rent or re-sell them to retailers handling products of the individual manufacturers.

### Frigidaire Gets Many Apartment Orders

A growing list of Seattle apartment houses are completely equipped with electric refrigeration units. Among the larger installations of the Frigidaire Corporation are: Admiral Apartments, Friedlander Courts, Semore Apartments, the Porter, Miramar, McQuesten, Lancaster, Freed, Wellesley, Sovereign, Ranier, McDermott,

Cassel Crag, Essary, Harvard Court, De Selm, Cavalier, and Commodore Apartments, and in those built for Gardner Gwinn, S. P. Fries, Benjamin Holroyd, and William A. Bolt.

## BOHN SYPHON REFRIGERATORS



Beautiful, Distinctive. Can be had in 7, 9 and 12 cubic foot net food storage capacity.

White Porcelain Enamel inside and outside. The machine compartment is ideal for storage space where remote installation is made.

For Electric Refrigeration

Write for Full Particulars

Bohn Refrigerator Company

SAINT PAUL, MINNESOTA

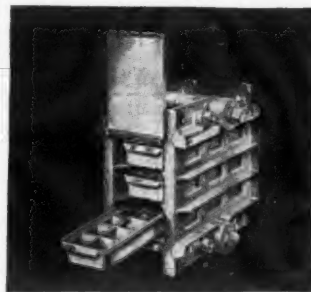
These Models are on Display at our own Stores in

NEW YORK  
5 E. 46th St.

CHICAGO  
227 No. Michigan Blvd.

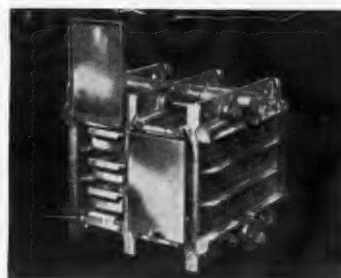
BOSTON  
707-709 Boylston St.

## Freeze cubes in shortest time Give longest hold-over



2-Section 11" Unit

These two illustrations show method of increasing size of units horizontally.



3-Section 11" Unit

Illustration at right shows method of increasing size of units vertically.



Two 3-Section 11" Tier

## American Domestic Refrigerating Units

AMERICAN Domestic Refrigerating Units accomplish the two most important functions of domestic refrigeration:

- (a) Freeze cubes in shortest time.
- (b) Give longest hold-over.

Two of the oldest and largest manufacturers of domestic refrigerating machines give their reasons for standardizing AMERICAN Domestic Refrigerating Units. Read excerpts from these letters below.

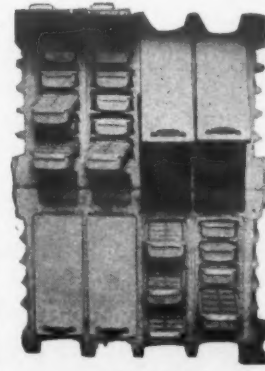
AMERICAN Domestic Refrigerating Units are made in three heights—11", 13" and

15"—with depth and width measurements the same to permit tiering any combination of heights. The 11-inch unit has 3 rows; the 13-inch 4 rows, and the 15-inch unit 5 rows of copper tinned trays as illustrated above. They are manufactured of ARCO Metal, a special metal developed for refrigerating castings. Direct expansion units are tested 300 lbs. air under water.

Prompt delivery in any assemblies from our factory at Springfield, Illinois. Mail the coupon for catalog.

Units assembled to fit any box of domestic or semi-commercial type.

Units can be furnished without trays, cabinets or doors where refrigerating surface only is required.



Assembly of Units Freezing 480 Cubes

"When the machines were thermostatically controlled, your units produced ice in a little less time than either of the other parts of cooling units, and when the machines were run continuously, ice cubes were produced in one-half of the time. The machines equipped with your units did not operate as much when thermostatically controlled as the others, which we believe to be the reason for the small difference in time required for freezing cubes, but naturally due to not running so much, electric consumption was less.

Our machines equipped with your units do not consume as much electricity as competitive units with coils, and produce ice cubes on the average in 25 per cent less time."

"We have found them much more efficient not only in more quickly lowering temperature but in maintaining it.

Another feature which commends it to owners is that the operating period necessary to produce proper temperatures is much shorter.

We have also found by experimenting that ice cubes for table use can be frozen in about one-half the time. We have therefore decided on all of our future installations to adopt radiators and entirely discard the use of coils."

Industrial Division, American Radiator Co., 816 So. Michigan Ave., Chicago.

Send me illustrated catalog including complete details, measurements, etc., of American Domestic Refrigerating Units.

(Name) \_\_\_\_\_

(Street Address) \_\_\_\_\_

(City) \_\_\_\_\_ (State) \_\_\_\_\_

## AMERICAN RADIATOR COMPANY

Industrial Division No. 104

CHICAGO NEW YORK KANSAS CITY BUFFALO LOS ANGELES FACTORY AT DETROIT, MICH.  
Manufacturers of AMERICAN Domestic Refrigerating Units, Commercial Refrigerating Sections, AMERICAN Float Valves, (Low pressure—High Pressure), also special job foundry work per your designs and requirements.



# ELECTRIC REFRIGERATION NEWS

The Business Newspaper of the Electric Refrigeration Industry

PUBLISHED EVERY TWO WEEKS BY

BUSINESS NEWS PUBLISHING CO.

554 Macabees Building, Woodward Avenue and Putnam Street  
Detroit, Michigan. Telephone: Northway 4243-4244

Subscription price: \$1.00 per year; three years for \$2.00  
Foreign Countries: \$1.50 per year. Advertising Rates on Request

Note: These rates good only until September 15, 1927.  
See announcement and subscription coupon on Page 8.

F. M. COCKRELL, Editor and Publisher H. A. DELASHMUTT, Advertising Manager  
HELEN JO SCOTT, Assistant Editor BEULAH WERTZ, Circulation Manager  
Copyright 1927 by Business News Publishing Co.

AUGUST 31, 1927

## Extending the Market

Aggressive salesmanship and aggressive advertising are dominant factors in the introduction of any new article. Making the public realize the virtue and the value of the product can only be accomplished by dominant enterprise, by effort and energy to create the demand.

In introducing electric refrigeration to those not yet awake to the real progress represented and embodied in this type of household service, neither the idea of the article alone, nor its cold, calm physical substance will make the sale, nor carry forward to extensive use the kind of refrigeration which has been developed as a step in the march of progress and enlightenment of this twentieth century of ours.

All the ideas about electric refrigeration in the world, unless put into active use, unless shoved by energy and intelligent effort, well directed, skillful salesmanship, will not create the necessary new markets for this commodity nor install the units where they will operate to the best advantage by demonstrating their practical utility.

It takes effort of a serious, constant, unrelenting variety, and the energy expended must flow through the channels of aggressive selling and aggressive advertising, of a positive, constructive nature, recognizing only the virtue and excellence of the article which it is urged be adopted for better service.

So many influences are at work to secure the idle dollars of the American woman, the business man and capitalist, that business cannot be secured and developed without the most aggressive effort. A quality line of merchandise, irresistibly dominant in its appeal, with forcefulness in selling and advertising, will win the favor of the public and secure the money which it may have to expand for those things and only those things which, through salesmanship and advertising, it has come to believe it must possess.

## The Day of Reckoning

With the approach of the end of summer comes "the day of reckoning" in the electric refrigeration industry. The peak season having passed, and with it the mad rush for record sales, there is a general casting up of accounts. Selling plans and new designs which appeared faultless a year ago, now stand out in their true light. Successes and failures are chalked up for future guidance.

With each year of added experience the industry reduces its speed while it gains momentum. The weight of experience supplants the speed of enthusiasm. More power is required to move the increased mass of the industry and at the same time its progress becomes more difficult to retard. Small obstacles which might easily have deflected its course in earlier days may now be surmounted with greater ease.

Having drawn the line, so to speak, under the results of the season, the industry will quickly turn its attention to the problems of improvement. Machines and materials, men and methods alike, must undergo scrutiny. Weaknesses in design and organization will be examined and analyzed. Every possibility for betterment will receive consideration.

It is fair to say that the coming months represent the greatest opportunity for the manufacturers of parts and accessories, materials and processes which offer advantages in efficiency and reliability. The coming period is especially favorable to those who have worth-while services to offer for the improvement of distributing and marketing machinery. Renewed interest will be taken in educational facilities and training courses. Executives will lend a willing ear to those who are experienced in successful advertising and merchandising methods.

In brief, the industry will soon prepare to take a new grip on its job with such added strength and wisdom as has been bestowed upon it by another year of experience.

Those who have given the best that is within them to promote the development of electric refrigeration are more confident than ever of the great future of the industry. Those who saw the business merely as something new, a welcome relief from the exacting requirements of the older and more established lines of endeavor, are now realizing that the new field also demands sincere and continued effort if success is to be achieved.

It cannot be too strongly impressed that electric refrigeration provides a fundamental service to home and industry. It is not a luxury, a current style or a passing fad of which the public may tire in time. Those who have tasted of the benefits of electric refrigeration, are fully "sold" on its merits. The time is rapidly approaching when no home or commercial establishment can be considered at all modern in its equipment if it is lacking in this essential feature. Architects and builders are providing for electric refrigeration in new construction as a matter of course. In millions of homes there is a definite consciousness of a desire to possess this modern appliance.

## Tacoma Electric Shop Capitalizes on Public Interest in Electric Refrigeration



A. B. Conrad, proprietor of the Blue Bird Electric Shops, Electro-Kold dealer in Tacoma, Washington, is an aggressive merchandiser and has built up a fine organization. Special attention has been given to electric refrigerators and washing machines, with excellent results.

## Home Economics Advisor Gives Unqualified Endorsement to Electric Refrigeration

Proper Care and Use Explained in Discussion of "Food Preservation in an Electric Refrigerator"

NOTE: Following are extracts from an article in the "Better Housekeeping Department" of *The Ladies' Home Journal*—"A department of cookery and household economics," conducted by Millicent Yackey.

Do not allow the cooling unit of your electric refrigerator to remain hoary and frost-covered indefinitely, even though it looks cool and refreshing that way. If you live along the Gulf Coast, where the climate is warm and wet, these icy scenes in your refrigerator will appear more frequently than if you live in a high, dry climate; but in either case, remove this frozen moisture promptly from the surfaces to which it clings. Otherwise appearances will be deceiving, and while the pipes may look cold, the cooling chambers of the box will be comparatively warm, because the frost coating prevents the air from coming in contact with the cooling unit.

To defrost the refrigerating unit, one needs only to stop the supply of electricity

allowing as much space as possible to surround each one. For this reason, eggs should be kept in a wire basket; fruit taken out of the bags and left loose or in open utensils, but oranges should be left wrapped in their tissue paper covers to prevent the tender skin from drying out; berries may remain in the box if it is dry; otherwise they should be put in a colander or sieve without washing; celery, first cleaned, should then be put in a covered jar to avoid drying and discoloration; uncooked meats should be left unwrapped, for paper wrapping will dry and stick to them; and asparagus stalks remain freshest when allowed to stand in a little water.

While the temperatures of the several shelves differ very noticeably, these temperatures remain quite constant in electric refrigerators, due to the automatic controls with which they are equipped. These controls are regulated to maintain given temperatures, in accordance with the amount of cooling space allowed, the position selected for placing the refrigerator in the house, and nature of the use made of it.

The ability to maintain these even temperatures is what adds greatly to the success of electric refrigeration. Food thus stored while at its best will keep over a longer period of time than in a refrigerator of fluctuating temperatures. We must not, however, expect electric refrigeration on a household scale to accomplish what it does for commercial cold storage.

### Food is Desirable Only at its Best

For this reason, when doing your marketing, consider the natural qualities of the available foods and do not plan to hold any food beyond a period conducive to the best health of the individual and the best flavor of the food. For instance, milk should be purchased fresh every day if this is at all possible, and especially if it is to be used as the main part of the diet for an infant or invalid.

There are also foods that have a natural delicacy of flavor that adds greatly to their popularity, and to acquire this they must be allowed to ripen fully before putting them in a refrigerator. Even then the flavor of peaches, pears, berries, melons, and so forth, may easily be destroyed if they are stored over too long a period or at too low a temperature, even though they otherwise may appear to be in excellent condition.

Freezing does not improve the flavor of any food and under no circumstances should an electric refrigerator be so regulated as to allow foods regularly to become frozen when it is in everyday use. If such is the case it needs regulating.

However, if properly regulated when it is installed, this piece of equipment requires

very little electrical service for its general upkeep. The other occasional care required, as for instance, oiling, can easily be accomplished after it has been carefully demonstrated.

Taking all factors in consideration, there is no question of the practicability of electric refrigeration for household use.

## "POP ON ICE" GIVES WAY TO ELECTRICALLY REFRIGERATED BEVERAGES

Electric Cabinets Specially Designed for Bottled Drinks

Aggressive salesmanship and aggressive advertising are dominant factors in the introduction of any new article. Making the public realize the virtue and the value of the product can only be accomplished by dominant enterprise, by effort and energy to create the demand.

In introducing electric refrigeration to those not yet awake to the real progress represented and embodied in this type of household service, neither the idea of the article alone, nor its cold, calm physical substance will make the sale, nor carry forward to extensive use the kind of refrigeration which has been developed as a step in the march of progress and enlightenment of this twentieth century of ours.

All the ideas about electric refrigeration in the world, unless put into active use, unless shoved by energy and intelligent effort, well directed, skillful salesmanship, will not create the necessary new markets for this commodity nor install the units where they will operate to the best advantage by demonstrating their practical utility.

It takes effort of a serious, constant, unrelenting variety, and the energy expended must flow through the channels of aggressive selling and aggressive advertising, of a positive, constructive nature, recognizing only the virtue and excellence of the article which it is urged be adopted for better service.

So many influences are at work to secure the idle dollars of the American woman, the business man and capitalist, that business cannot be secured and developed without the most aggressive effort. A quality line of merchandise, irresistibly dominant in its appeal, with forcefulness in selling and advertising, will win the favor of the public and secure the money which it may have to expand for those things and only those things which, through salesmanship and advertising, it has come to believe it must possess.

## Newspaper Man Joins Electric Refrigeration Co.

Ray Arnold, formerly advertising manager of the *Milwaukee Journal*, is now general manager of the Electric Refrigerator Co., 131 Third street, distributor for General Electric in the Milwaukee district.

"Taking all factors in consideration, there is no question of the practicability of electric refrigeration for household use."  
Millicent Yackey.

long enough to allow the frost to melt from the metal surfaces. Usually this requires about eight hours, and can best be done overnight, while the box remains closed. There will be enough cold air thus retained to preserve the food perfectly until morning, when the electricity is again connected. Once a month in winter and twice a month in summer meets the average need for defrosting, except in high, dry regions, where it is needed less often, and in low, moist districts, where it is needed more frequently.

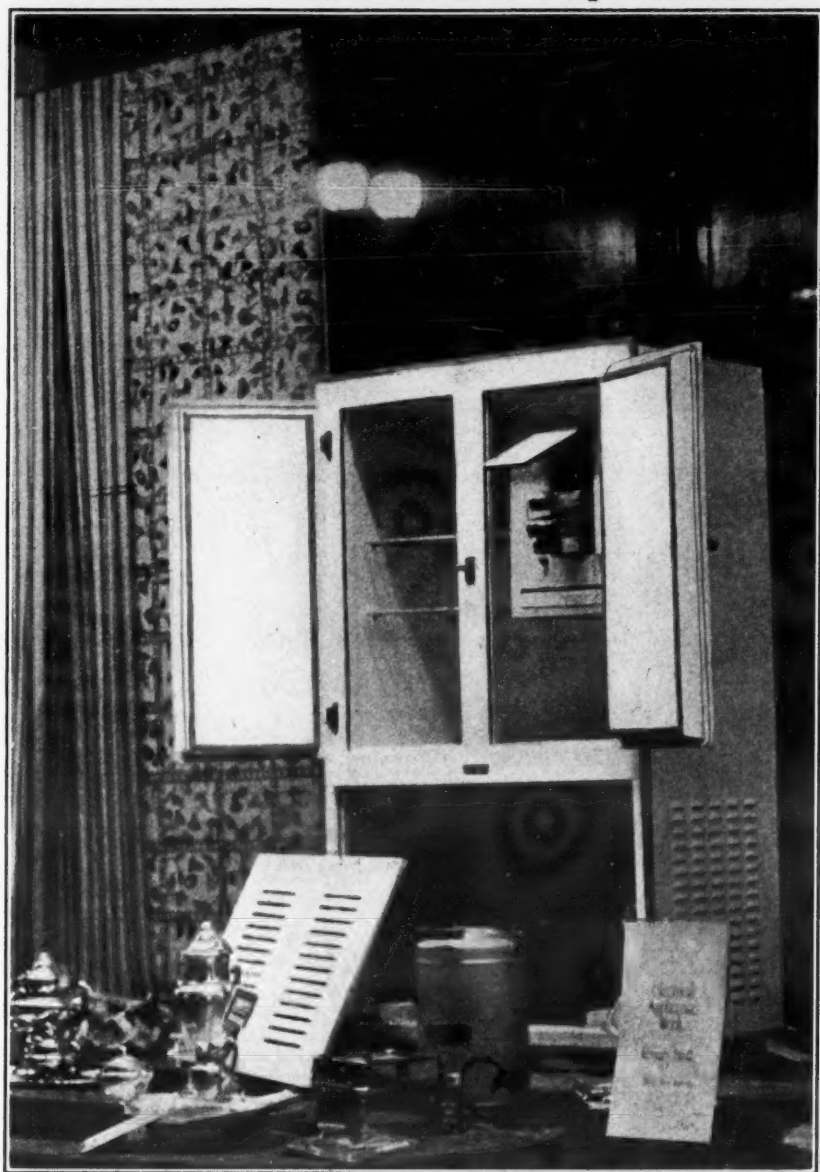
### Placing of Food an Important Factor

The moisture thus collected from the box increases the efficiency of refrigeration by keeping the air dry and the temperature low. It naturally follows then that in order to retain the moisture in foods stored for future use, such as prepared left-over dishes, they should be closely covered before putting them into the cooling chambers, and all liquids, such as iced cocoa, sauces, and the like, should also be kept covered.

Aside from defrosting when necessary, much can be done to make the best possible use of the cooling qualities of any refrigerator by providing a free circulation of the cooled air. To do this, allow it to pass readily through all parts of the box and come in contact with the entire surfaces of the foods by not stacking packages and utensils on top of each other, but



## Electric Refrigeration Featured In Educational Exhibit of San Francisco Department Store



Bright Colored Drapery in Orange and Rose Set Off White Finish of the Refrigerator

In co-operation with manufacturers of electric household appliances, the White House Department Store of San Francisco recently staged an extensive educational exhibit, which brought a greater response from the public than was anticipated by the officials of the store.

A large area in the household department was devoted to working displays and demonstrations of appliances by representatives of the various manufacturers. Kelvinator refrigerators, supplied by the Kelvinator Corporation, and Electrice units, supplied by Holbrook, Merrill & Stetson, of San Francisco, were an important part of the demonstration.

H. D. Nickel, display manager of the White House Department Store, arranged some very effective window displays, in which bright colors were used to advantage as a contrast with the white finish of the refrigerators. In the window shown in the illustration the electric refrigerator was set off with a background of cretonne drapery in orange and rose. An oval rug was placed on the floor in front of the refrigerator. Flood lighting directed from the top of the windows made the unit stand out in a striking manner.

In another window an oil cloth kitchen drape, in which an orange color predominated, was used as a background for a white and mahogany Kelvinator. An

orange bird cage was used as a decorative feature and an orange rug was placed on the floor. Electric radiators in gold finish and copper tub washing machine added their part to the glitter of the display.

Officials of the Pacific Gas & Electric Company and the Great Western Power Company enthusiastically endorsed the demonstration. The power companies reported that they had received more inquiries for electric house wiring in one week after the demonstration than had come in during the previous three months period.

### Young Radiator Company to Make Accessories

F. M. Young, formerly vice-president and general manager of the Racine Radiator Company, Racine, Wis., is now president and general manager of the Young Radiator Company, also of Racine. The new company has been formed for the manufacture of condensers and radiators.

### Has Heard Electric Refrigeration News Is Good

A Kansas City dealer writes: "We have heard quite a little about ELECTRIC REFRIGERATION NEWS, and if it is as good as we have been told, we will be glad to become a subscriber."

## DAIRY FARM COMPUTES COST OF ELECTRIC AID

A model dairy farm in Wisconsin, where a study of electricity's service has been made, yielded these calculations as to the cost for electricity at 6 cents a kilowatt-hour and the man-hours saved by farm electrification:

Man Hours—Cost	Saved
per Month	per Month
Milking Machine .....	\$ 2.65 30
Ironing Machine .....	2.15 8
Pump Power .....	6.09 8
Lighting .....	6.47 12
Milkhouse Ice Machine....	6.33 44
Milkhouse Water Heater..	7.55 28
Range .....	11.35 40
Residence Water Heater..	7.08 40
Residence Refrigerator ....	1.74 4

Totals..... \$51.41 214  
If the time saved is figured at 50 cents an hour, the total saving less the cost of electricity would be \$55.59.

### U. S. Navy Boats Adopting Electric Refrigeration

Naval boats are a new field in the Northwest for the installation of electric refrigeration. The Frigidaire Corp. of Seattle has installed electric refrigeration on the torpedo boat destroyer Stoddard. The U. S. S. Idaho has also been equipped with this type of refrigeration.

One of the large boats carrying passengers between Seattle and San Francisco is soon to have a Frigidaire unit.

### Musician Specifies Proper Key

"To assure harmony between our various household appliances," wrote the famous musician to the oil-heater concern, "I would request that you make an E-flat installation."—*Detroit News*.

## Advertising Stunt May Create a Vogue For Highly Decorated Refrigerators

The technic of a modern artist of futuristic tendencies, enlisted to enliven a display of electric refrigerators recently opened on a busy street in New York City, may start a vogue for highly decorated kitchens. A medium-sized cabinet was turned over to the artist, with results that are attracting hundreds of people daily. The four sides of the unit were employed as canvases by the artist in depicting his idea of a sea scene, a night club, the beach, and a living room. Violent colors and the uniqueness of his interpretations are amplified by the lighting that is centered on this cabinet in the evenings. The attractiveness of the display arrests the attention immediately, while the floor men that explain the merits of the machines claim that a number of offers to buy the painted model are made every day. It is not, they state, for sale, but "we have other models that we can show you."

One of the most interesting new applications of electric refrigeration is the development of the bottled beverage cabinet. Just as the electric ice cream cabinet has revolutionized the ice cream industry, so this modern beverage cabinet is developing the bottler business.

By means of the same dry cold which safeguards food supplies in the household refrigerator, various kinds of syrups and soft drinks, milk, etc., in infinite quantity, can be stacked and stored, each kind in its own compartment.

The old-style cabinets, cooled by means of ice, necessitated the hauling of cracked ice by either the bottler or retailer, and the attendant sloppy mess as the ice gradually melted and spread in pools around the usually leaky wooden cabinet. Bottles, being immersed in this mass of slush, were often handed to the trade without being wiped off—to the ruination of many a dainty glove and temper.

The new electric cabinets are clean and

sanitary, usually constructed of steel, with an eye to beauty and harmony with decorative surroundings. They are permanent in construction, because subject to no depreciation through moisture, and therefore a much more profitable investment to the purchaser.

Along with the increased demand for stimulating, ice cold drinks, the dispenser of such beverages himself can keep pace with his increased trade, for he has no counter to wipe, no floor to mop up—and, above all, no discomfort from rheumatic fingers caused by dipping hands into damp and water.

### CONNECTICUT COMPANY CHANGES NAME

The Polley Refrigerating Corp., East Norwalk, Conn., has filed notice with the secretary of state at Hartford to change its name to the Connecticut Automatic Refrigerating Corporation. The company has been in business a number of years.

### New Mississippi Company Reported

Thomas K. Marbury and associates are reported in the July number of *Refrigerating World* to have organized a company in Meridian, Miss., for the manufacture of automatic refrigerators.

### Executives Read Every Word

"It may interest you to know that all of our executive officers and department managers read practically every word of *ELECTRIC REFRIGERATION NEWS*. We find it very interesting, indeed."—Jos. T. McKinney, advertising manager, Rex Mfg. Company, Connersville, Ind.

## Thousands of Food Merchants Know by Experience

HERE is a new McCRAY case which attracts trade by making it easier to shop. It builds sales by displaying appetizing foods in a tempting manner. It speeds up service, cuts out spoilage, reduces expense and increases profit, as thousands of food merchants know by experience.

The McCray No. 103, used with mechanical refrigeration of any type, or with ice, keeps perishable foods perfectly in their original freshness and flavor. And the cost of operation, with either machine or ice, is exceedingly low, as any user will tell you.

More than a third-of-a-century's

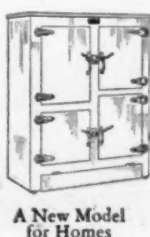
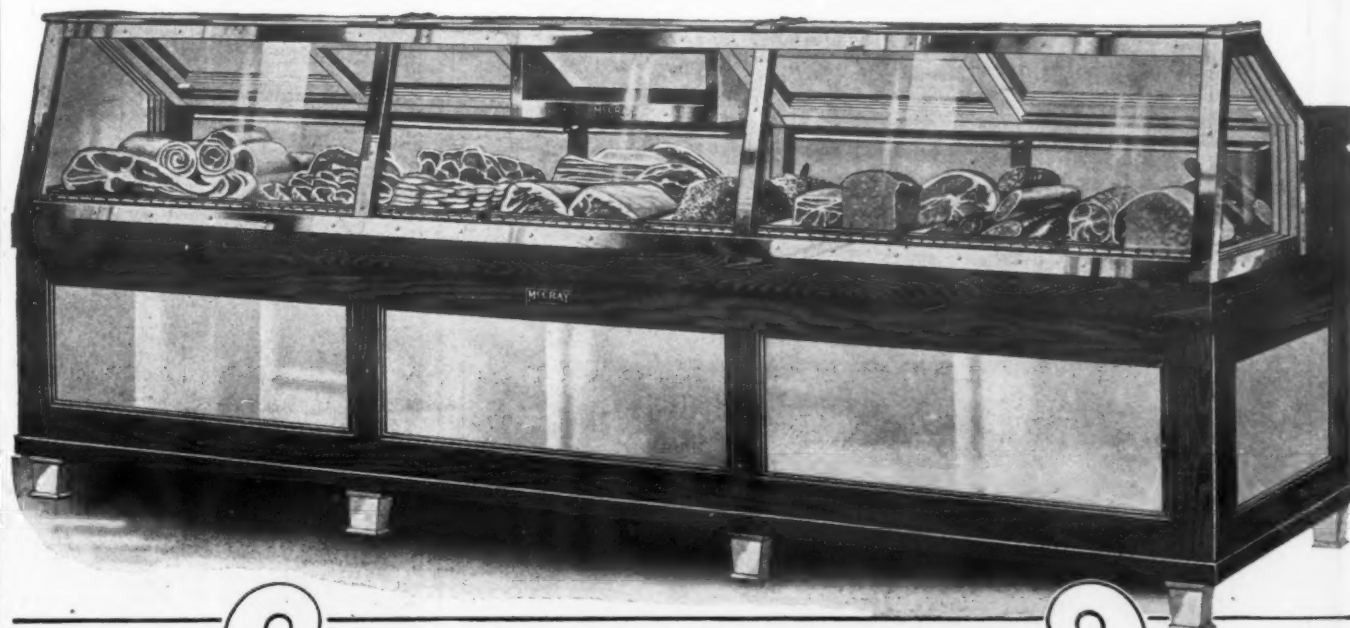
experience is embodied in this new McCray case. For every refrigerator need there is a McCray model of suitable size and style, not only in stores and markets, but in hotels, restaurants, hospitals, institutions, florist shops and homes, as well.

PURE CORKBOARD INSULATION, sealed with hydrolene cement, insures perfect air-tightness, efficient refrigeration. All McCray models may be used with any type of mechanical or electrical refrigeration. Whatever your need, send now for complete information about McCray equipment to meet your specific purpose.

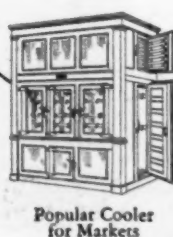
Food Merchants, ask about our easy payment plan  
McCray Refrigerator Sales Corporation  
Dept. 66, Lake St., Kendallville, Ind.

# McCRAY

## REFRIGERATORS



A New Model for Homes



Popular Cooler for Markets



For Hotels, Institutions, etc.



For Grocery Stores



For Florist Shops

## PIPE and TUBE FITTINGS

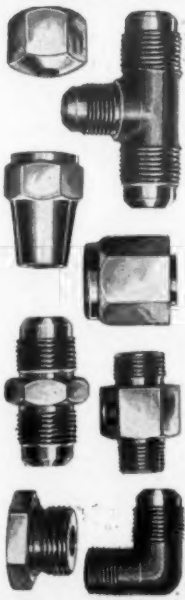


### Made From Brass Rod, Castings or Forgings

For many years we have specialized in the manufacture of brass fittings, in small sizes, for connecting brass and copper tubing.

In addition to fittings made from brass rod and castings, we are now producing similar parts made from BRASS FORGINGS to meet the requirements of Iceless Refrigerator Manufacturers for fittings of a superior type. These fittings will not leak gas, air or liquids under mechanical pressure. They have the compact grain structure, high tensile strength and smooth, flawless surfaces found only in forgings. Our forged fittings are accurately machined, carefully inspected and equal to the most exacting requirements.

Send a sample or blue-print for quotations on parts of a special nature. Catalogue No. R-30, showing our complete line of standard fittings will be mailed on request.



COMMONWEALTH BRASS CORPORATION  
DETROIT 5781-5835 COMMONWEALTH AVE. MICH.



## Wisconsin Distributor Believes Farm Market Well Worth Cultivating

Exhibits at County Fairs, Contests and Personal Canvassing in Rural Districts Getting Good Results

By Al P. Nelson

While many other firms throughout the country selling electric refrigerators are concentrating all their sales efforts on selling commercial electric refrigerators and domestic refrigerators in towns and cities of fair size, the Dane County Electric Company, Madison, Wis., is taking a little time off now and then and also canvassing the farming districts in that part of southeastern Wisconsin.

According to A. M. Ryser, who is supervising refrigerator sales, the farm market for his firm is going to be a very large one in the future, for they have already made quite a number of sales in this field and have worked up a very formidable prospect list.

"We are the distributors for Frigidaire refrigerators in three counties—Jefferson, Rock and Dane," stated Mr. Ryser. "And while our actual sales may not stack up to a startling amount, we have done an immense amount of pioneer work that is bound to be reflected in sales later on. Take for instance in the farm field. We are truthful when we say that every family, including farm and city, has been canvassed in three Wisconsin counties for which we are distributors. Out of that canvass we have secured a wonderful prospect list. In the farming regions we found that there was a great deal of interest displayed by the farmers in electric refrigerators. This was directly against our convictions when we went into the field.

### Farmers Show Interest

"We rather expected that we would have to fight hard to even gain attention. However, we were wrong in this. While it was hard to break into the farm field as far as actual sales were concerned, it was not at all hard to break into the field of attention. In almost every case we found farmers very willing to listen to the principles of electric refrigeration and what it will do."

Mr. Ryser stated that there is need of electric refrigeration on the farm, particularly where they have so many perishables. In southern Wisconsin there are many wealthy farmers, and this field is one that can easily afford to install this type of refrigeration.

The main difficulty in the way of making sales in the farm field at the present time is price, states Mr. Ryser. The farmers in this district appear to consider the original cost of installation as prohibitive to buying, but in many instances they have been convinced that electric refrigeration is cheaper as time goes on. When shown this many of them have actually purchased units, Mr. Ryser states.

Just as educational work is being carried on by many other firms in the electrical refrigeration dealer business in the cities, the same sort of work is being carried out in the rural districts by the Dane County Electric Company. It is tapping a new sales field that in the future will be a source of much business.

Not content with merely canvassing these counties, the Dane County Electric Company is also doing some fine promotional work by putting displays at the county and town fairs in these various districts. Mr. Ryser is a firm believer in this sort of advertising, and he believes that interest shown at fairs is of the best kind, as the spectators are always anxious to see the various machines on display explained.

Almost every village and town in Wis-

consin has a fair or festival of some sort, and on these days all the people living within a radius of fifteen miles come to town and spend the day in visiting the various booths.

"These displays have done us a great deal of good," states Mr. Ryser, "and have helped us put over electric refrigeration as well as laying the foundation for future sales. At the Home Show at Janesville, Wis., this year, we gave away an electric refrigerator, which created a great deal of interest. The publicity which we obtained by it was worth while, too."

### Prize Contests Attract Attention and Produce Sales

Mr. Ryser said that each woman entering the Home Show was given a ticket and at the end of the show the tickets were deposited in a box and a lucky number drawn. An electric refrigerator was also given away in a similar manner at the Fourth of July celebration at Jefferson, county seat of Jefferson County. Promotion ventures of this kind no doubt are a little costly, but at the same time they bring the products before the eyes of the public and many sales result eventually.

"We certainly have received some fine support from the newspapers in this section," stated Mr. Ryser. "Whenever we staged any contest or gave away an electrical refrigerator the newspapers gave us good stories on it and played up the event considerably. This certainly helped us to bring electrical refrigeration before the public in a way that we could not hope to do otherwise. They knew that we had a great deal of faith in our products and that we were out selling them all the time."

"We find that canvassing has worked up some fine prospect lists for us in this part of the country. The people have time to talk to you, and when a man comes along and represents a reputable electrical refrigeration concern they are always ready to give him some time to explain his proposition. We believe that personal canvassing on our part has advanced our sales at least eighteen months in our territory. It means that instead of waiting for the people to come in and ask to be shown the principles of refrigeration, we are going out and showing them, besides pointing out that electrical refrigeration is something that is not expensive."

### Believes Salesmen Should Concentrate On One Type

The firm has two men in each county selling electric refrigerators. One concentrates on the domestic trade and the other on commercial sales. In this way every possible source of the business is kept in touch with and every possible sale secured. "I think that a man can sell more refrigerators if he makes a practice of concentrating on one type of refrigerator such as either domestic or commercial," stated Mr. Ryser. "It means that a salesman will then map out his course, territory, etc., and follow down the leads. If he must take care of both commercial and domestic needs he is liable to become neglectful of the domestic and concentrate on the commercial, or whatever appears the most profitable. From our standpoint, then, some part of the trade would be neglected."

In order to stimulate interest among the salesmen to increase the total volume of

sales the firm stages quarterly sales contests that are always hot from start to finish, with the men averaging close scores all the time. The scoring system works as follows: Every \$25 is scored as one point. No certain total is required, although no prizes are given unless the men run better than average totals. Up to the present time prizes have been given regularly, which shows that the men are all working to increase their sales from month to month.

M. J. Fitzgerald is president of the company, and A. M. Ryser is in charge of electrical refrigeration sales. Only one other firm is pushing refrigerators as hard in this territory as the Dane County Electric Company, and that is the Electrical Refrigeration Company, also handling Frigidaire in the city of Madison. Outside of Madison the Dane County Electric Company has the exclusive sales rights of Dane County.

### Stamford, Conn., Dealer Says Business is Good

The Downes Smith Company, 79 Atlantic street, Stamford, Conn., reports business active. Among the more recent installations this company has made, the following are included: water cooler at the plant of the Conde-Nast Company, Sound Beach; refrigerators in Gibert's Market, Springdale; Block's Wonder Market, 320 Atlantic Street, Stamford; 12 refrigerating units in the apartment house on Washington Court for Samuel Zatkun; and single units in the residences of Schuyler Merritt, on Blatchley road, and Judge Charles Lockwood, in Noroton Heights.

### 24-Unit Job in Prospect

Bids are being received for the construction of an apartment house on Glenbrook Road, Stamford, Conn., for Samuel Silberman, of 77 Glenbrook Road. The plans were prepared by Architect William Schmidt, 175 Greenwich Avenue, and provide specifications for 24 electric refrigerating units.

## SPECIFY ANSUL SULPHUR DIOXIDE

The Product with a Factor of Safety

ANHYDROUS SULPHUR DIOXIDE

Absolute Protection for Refrigeration

ANSUL CHEMICAL COMPANY

MARINETTE, WIS.

## Wilder Metal Sheets

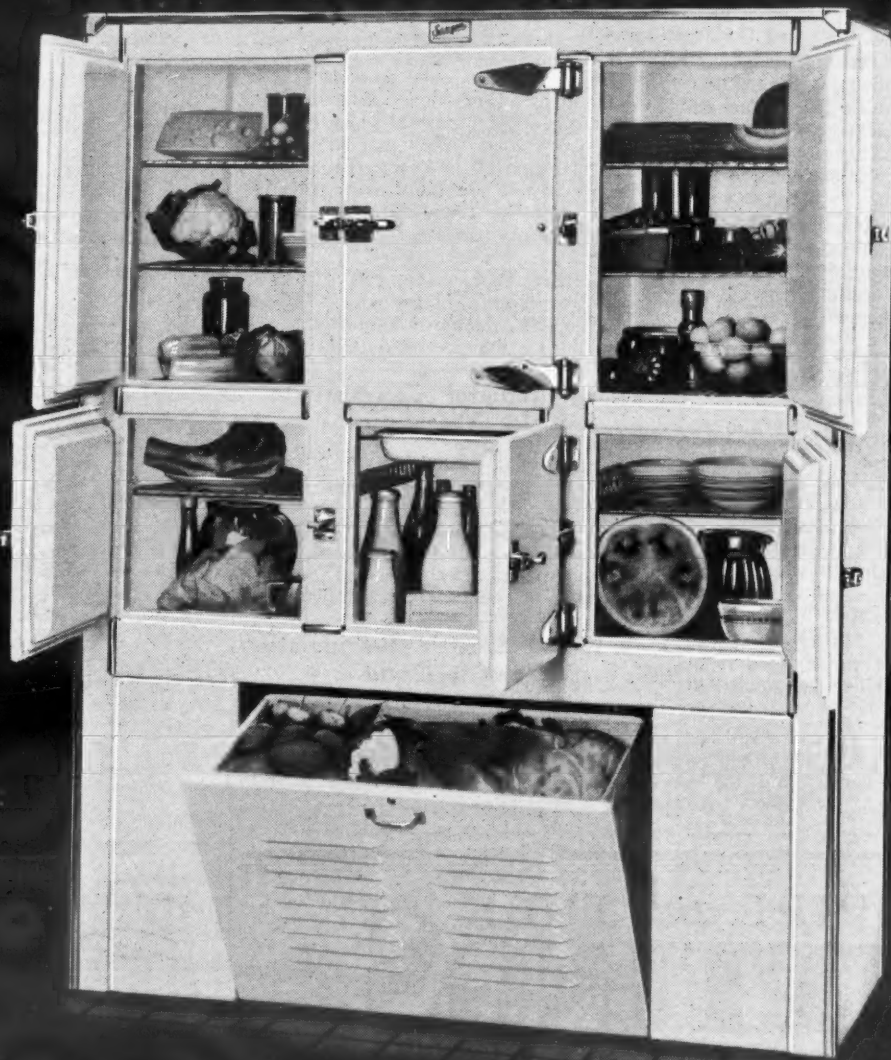
The Proven Product for

Brine Tanks : Cooling Units  
Inside Linings : Refrigerator Parts

Let us send you samples for your experimental shipment. Our mill warehouse is at your service for prompt shipments

WILDER METAL CO.

NILES, OHIO



MODEL 1621

CABINETS BY

*Seeger*

SAINT PAUL

The Prestige of the name Seeger makes selling easier and assures a good profit. Those that want a good cabinet are willing to pay the price of Cabinets by Seeger. They are built to receive any Standard Electrical Refrigeration Unit. This makes it possible to sell any one or more Units together with only one line of Cabinets.

SEEGER REFRIGERATOR COMPANY

SAINT PAUL, MINNESOTA

Here's what a big refrigerator company says about Ferro Double Strength Cleaner

"We are glad to add our word for Ferro Double Strength Cleaner, as we have been using this material for about six months and have secured very satisfactory results."

ILLINOIS REFRIGERATOR CO.

H. J. RENDALL, Secretary

We guarantee our cleaner better and cheaper for use in cleaning sheets for enameling. Try a barrel.

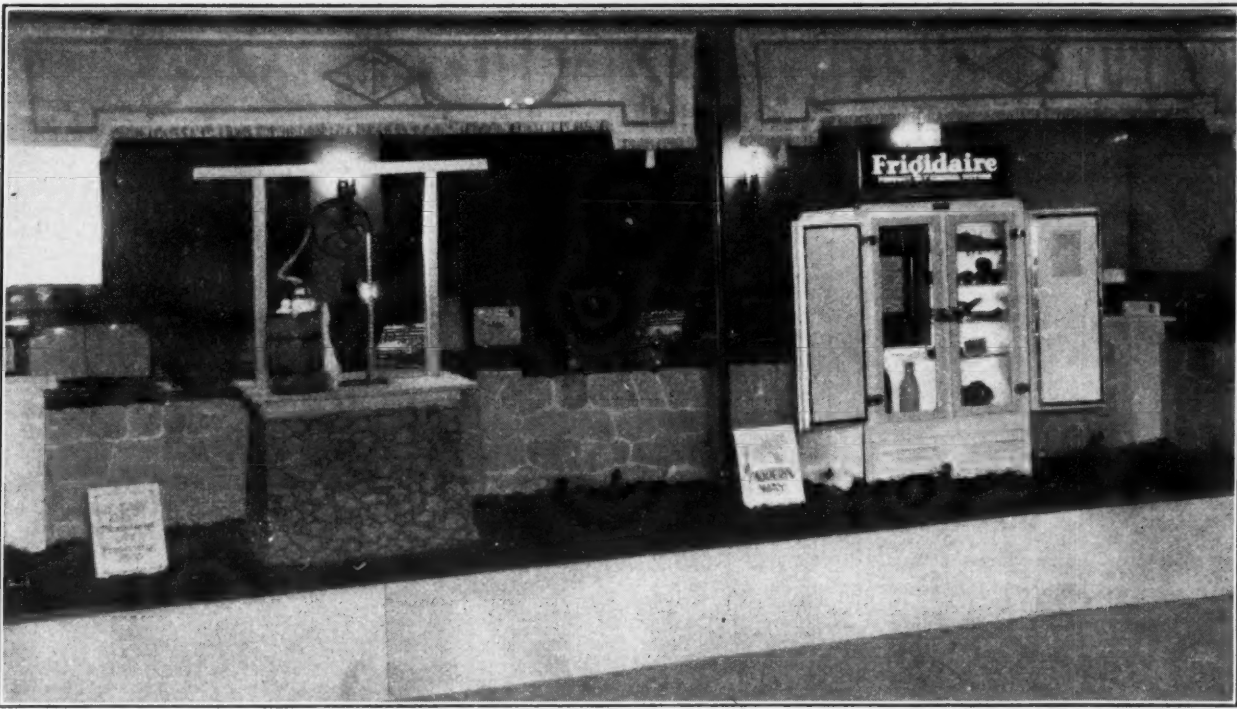
111

THE FERRO ENAMEL SUPPLY COMPANY

CLEVELAND, OHIO



## Old and New Methods of Protecting Food Shown in Central Station Window Display



An interesting electric refrigeration window display was used not long ago by the West Texas Utilities Company of Abilene, Texas.

The display consisted of two units, the left portion of the window being given over to the display of a very old method of preserving food, while the right section showed the 1927 method. Amid natural looking surroundings an old-fashioned well was shown. It was of the rope and pul-

ley variety, with a bucket, in which were the dairy products the family wished to preserve, attached to the end of the rope. Eggs and a jar of milk are shown, for in the days before there was ice on the farm the only recourse the wife had in hot weather was to lower the perishable food into the cool waters of the well. To the left of "the old oaken bucket" was a card reading, "In olden days this was the method used in preserving foods." The modern way depicted at the right

showed a Frigidaire, white, sanitary, revealing shelves immaculately clean, laden with all kinds of foods properly kept in hot weather in temperature of low degree. Against the stone wall and the artificial grass floor, the Frigidaire showed off to excellent advantage.

Although, beyond a doubt, it was the old oaken bucket that drew the attention of passersby, once they had stopped to look at the old-fashioned well reproduced in the window, invariably they passed on to view and admire the gleaming electric refrigerator.

## Woodbridge to Represent Electric Refrigeration Industry on Board of American Management Association

Executives of Large Corporations to Study Problems of Production and Distribution

The electric refrigeration industry is represented in a group of forty-one leading business executives who have organized an Advisory Board of the American Management Association, feeling that improved management methods are essential in maintaining present prosperity and that knowledge of such methods should be spread more quickly throughout business.

C. K. Woodbridge, president, Electric Refrigeration Corp., Detroit, is on the Board. A wide range of industries and some of the largest corporations in the country are represented. Sam A. Lewisohn, chairman of the board of directors of the American Management Association, announces the complete personnel of the new Advisory Board as follows:

Barringer, J. H.  
1st V. P. and Gen. Mgr. Nat. Cash Register Co.  
Berend, E. R.  
Pres. Hammermill Paper Co.  
Betts, E. H.  
Pres. Cluett, Peabody & Co., Inc.  
Bloom, Edgar S.  
Pres. Western Electric Co.  
Cutter, Victor M.  
Pres. United Fruit Co.  
Danforth, William H.  
Pres. Ralston Purina Mills, Inc.  
Dennison, Henry S.  
Pres. Dennison Mfg. Co.  
Dietz, C. F.  
Pres. Bridgeport Brass Co.  
Donnelley, T. E.  
Pres. R. R. Donnelly & Sons Co.  
Eastman, Lucius R.  
Pres. The Hills Brothers Co.  
Edison, Charles  
Pres. Thos. A. Edison, Inc.  
Everitt, George B.  
Pres. Montgomery, Ward & Co.  
Filene, E. A.  
Pres. William Filene's Sons Co.  
Hall, E. K.  
V. P. Amer. Telephone & Telegraph Co.  
Harbord, J. G.  
Pres. Radio Corporation of America  
Herr, E. M.  
Pres. Westinghouse Electric Mfg. Co.  
Hook, Chas. R.  
V. P. and Gen. Mgr. American Rolling Mill Co.  
Johnson, W. H.  
Pres. Philadelphia Electric Co.  
Kaufmann, Edgar  
Pres. Kaufmann Department Stores  
Kincaid, W. W.  
Pres. Spirella Co., Inc.  
Lee, Elisha  
V. P. Pennsylvania Railroad Co.  
Leeds, M. E.  
Pres. Leeds & Northrup Co.  
Lewisohn, Sam A.  
Adolph Lewisohn & Sons  
Montgomery, F. H.  
Pres. Knox Hat Co.  
Marshall, Seth  
Pres. Marshall-Wells Co.  
Rike, F. H.  
Pres. The Rike-Kumler Co.  
Rodgers, A. S.  
Pres. White Sewing Machine Co.  
Roos, A. J.  
1st V. P. and Treas. Diebold Safe & Lock Co.  
Saylor, P. D.  
Pres. Canada Dry Ginger Ale, Inc.

Both production and distribution will be included in the scope of the board, which will serve in guiding the policies of the association and in focusing its increased research facilities on pressing industrial problems. Among the fields in which new management methods are now being developed and tested by the association and its members are those of labor efficiency and labor relations, financial control and budgeting, sales research and salesmen's training, office management and personnel administration.

### Commends W. E. Clement's Article on Developing Man Power

"I have read in ELECTRIC REFRIGERATION NEWS of July 6, 1927, with a great deal of interest the very fine and comprehensive outline of the sales and service plans for developing man power in the sale of electric refrigeration as presented by William E. Clement, commercial manager of New Orleans Public Service, Inc.—C. E. Loman, sales department, Kelvinator, Inc., Baltimore, Md.

### Architect Specifies 12 Units for Greenwich Job

David Skolkin, 4 West 46th Street, New York, has filed plans for an apartment house of modern construction to be erected on Greenwich Avenue, Greenwich, Conn. From plans by Louis J. Laskin, 4 South Fourth Street, New York, the building will be 40x95, four stories high, and will require electric refrigerating apparatus for 12 apartments.

## RECIPES OF INTEREST TO WOMEN PROSPECTS

### Tested Cold Dishes to Intrigue the Housewife

By Sarah E. Dunn

In households that boast an electric refrigerator the summer food problem is tremendously simplified and a distinct change of menu is effected with effort and with excellent results. In our house we always have at least three cold main meals a week, and on the days the hot meals are served variety is introduced at the beginning of the meal with a jellied soup or at the end with a delicious frozen dessert. The following recipes have been tested in my own electric refrigerator and we have found them delectable.

#### Cold Salmon

To prepare cold salmon for a family of four buy one pound of fresh salmon and boil it tied in a bag of cheesecloth. The skin is then removed and the salmon placed in a deep form or bowl. Around it are arranged thinly sliced boiled carrots and about one pound of fresh boiled peas. Season with salt, pepper and paprika to taste and then pour over it one pint of fish stock which has been seasoned and to which one

tablespoonful of gelatine has been added. Let cool and then place form in the electric refrigerator and let settle and chill through thoroughly. Serve on a bed of lettuce leaves and garnish with slices of hard-boiled egg. Cut down into slices.

#### Chicken and Mushrooms

Left-over chicken can be used in making a delectable dish of chicken and mushrooms. Remove about two cupfuls of chicken meat from the chicken. Boil one-half pound of mushrooms and a few bones of the chicken until the mushrooms are cooked. Remove them from the water to a separate dish and strain the water into another vessel. Season it with kitchen bouquet and salt and pepper, reheat and stir in one tablespoonful of gelatine. Cut the mushrooms in quarters, mix with chicken and pour the liquor over this. Put in a form and let settle and chill in the electric refrigerator. Serve on lettuce or romaine with sliced tomato garnish.

#### Jellied Eggs

For jellied eggs use hard-boiled eggs. If six eggs are used you will need two cans of consommé. Bring this to a boil, add one and one-half tablespoonfuls of the dissolved gelatine, having first seasoned the soup to taste, arrange the eggs at regular intervals in the freezing tray and pour the soup over it. Let cool and then chill. One egg constitutes a portion. Serve with salad.

## REFRIGERATION STAMPINGS

We Specialize in the Design and Manufacture of

### ICE CREAM CABINETS

We make them complete or furnish parts separately

Brine Tanks Cooling Units  
Unit Supporting Bases and Perforated Metal Covers  
METAL HOUSEHOLD REFRIGERATORS (Complete) OR CAN FURNISH  
OUTSIDE STEEL PANELS, INSIDE LININGS, LOUVERED PANELS,  
LEGS, ETC., SEPARATELY

We Have a Competent Engineering Staff to Help You

We Solicit Your Inquiries and Specifications

MOTORS METAL MFG. CO. - DETROIT MICHIGAN

## GLOEKLER PITTSBURGH PA

ESTABLISHED 1856

Grocer's Refrigerator No. 49007.  
7'6" wide, 2'8" deep, 6'8" high.  
Gross cubic contents 70' surface  
measure, 175.5 square feet.

Florist's Refrigerator No. 49037.  
5'1" wide, 2'8" deep, 6'8" high.  
Cubic contents 44'; surface measure  
130.4 square feet; glass panels  
in side for utmost display.

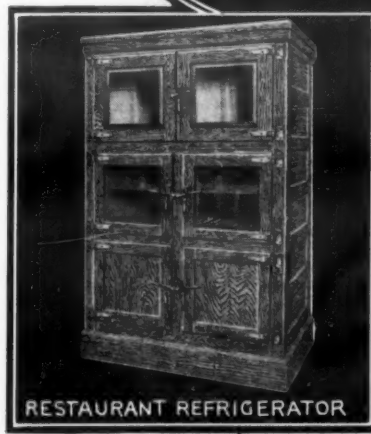
Restaurant Refrigerator No. 43007.  
5'4" wide, 2'8" deep, 6'8" high; cubic contents 47'; surface  
measure, 135 square feet.



GROCERS REFRIGERATOR



FLORISTS REFRIGERATOR



RESTAURANT REFRIGERATOR

## 12 MONTHS IN THE YEAR DEMAND for COMMERCIAL REFRIGERATORS

September is just as good a month for the sale of commercial refrigerators as May. To the grocer, florist, specialty shop, restaurant, delicatessen, etc., a refrigerator is an all-year-round necessity. The door is wide open to the commercial salesman twelve months in the year and every working day in the month. The real profit is in this department. But to get the best results, you need the right kind of refrigerators—

### BUILT ESPECIALLY for ELECTRIC UNITS

Three inches of pure cork board encased in waterproof insulating sheathing. Rubber gasketed doors to prevent leaks. Commodious coil chamber permits of over coiling to increase cube capacity if desired. Fine high gloss furniture finish in golden oak, French Gray or mahogany. If you have not already received the bulletin illustrated here, write for it today. It illustrates and describes the complete line.

BERNARD GLOEKLER CO.  
1627-29-31-33 PENN AVE.  
PITTSBURGH, PA.



SEND for THIS BULLETIN

## ROME CONDENSERS

are formed in any shape of one piece of seamless copper tubing, fitted with heavy gauge copper radiating fin. Rome condensers are five times as efficient as plain tubes.



ROME-TURNEY RADIATOR CO. ROME, N. Y.

## GLOEKLER PITTSBURGH PA

ESTABLISHED 1856



# How to Figure Refrigeration For Commercial Installations

Formulas and Data Used by Engineers in Calculating Heat Leakage Explained.

NOTE: Following is lesson No. 19 from the Correspondence Course, which is offered by the Nizer division of the Electric Refrigeration Corporation for the training of sales and service men. Complete information regarding the course, which is offered free under certain conditions, may be obtained by addressing Nizer Division, Electric Refrigeration Corporation, Detroit, Michigan.

## Commercial Refrigerators

Copyright, 1927, by Nizer Corporation. Although it can sometimes be shown that the application of electric refrigeration to the small sized individual domestic ice box will result in a saving of dollars and cents over the cost of refrigerating the same box with ice, it can hardly be said that this is ordinarily the case, and refrigerating equipment for this type of box is usually sold because of the more effective refrigeration which it produces and because of the many inconveniences which it eliminates.

The commercial refrigerator, however, and by the commercial refrigerator is meant the larger sized box or case which is to be found in the retail store or other places of business, presents a quite different aspect, for electric equipment for this particular application can rarely be sold unless it is possible to show that its use will be more economical to its purchaser than refrigeration by any other means. In other words, the problem is one of economy.

Since the economic phase is so important, it is fortunate that not only does the application of electric refrigeration to the average commercial box result in a superior grade of refrigeration than is possible with ice, together with an elimination of the many inconveniences which are attendant upon its use, but the total cost of electric refrigeration, and this includes all costs connected with it, such as interest and depreciation, is actually lower than would be the refrigeration of the same equipment with ice.

Since the sale of electric equipment for the commercial box is dependent so largely upon the economies which will result from its use, it follows that the popularity of this equipment will depend largely upon the ability of the engineer who specifies it to choose equipment which in size and design is most accurately suited to handle the work which it must do. The haphazard choice of refrigerating equipment for applications such as these may result in the purchase of equipment which is larger and therefore more costly than necessary, or, in that which is too small to perform the work required of it, in both of which cases economical operation cannot be expected. It is therefore most important in connection with commercial refrigeration that the engineer thoroughly understand the problems with which he is called upon to deal, and it will be the purpose of this lesson, and the one which is to follow it, to show how the more common of these problems should be solved.

### Determining the Refrigerating Load

The first and most important problem which presents itself to the engineer in connection with the specification of equipment for the commercial application is the determination of the amount of refrigeration which the application requires. In the case of a refrigerator box or any other storage application, the amount of refrigeration required is represented by the amount of heat which must be removed from the box (per 24 hours), in order to maintain its interior and contents at the desired low temperature. Since there is no heat generated within the box, the amount of heat which is removed from it must be the same amount as enters it from the exterior. This is usually calculated over a period of 24 hours.

### How Heat Enters the Refrigerator

The heat which must be removed from the refrigerator enters it in three different ways. These are:

1. By leakage directly through the walls.
2. By way of the doors when they are opened.
3. By way of warm commodities which are placed in the box for cooling and preservation.

Item No. 1 is by far the most important and should receive first consideration.

### Leakage Through the Walls

The amount of heat which enters the refrigerator as a result of leakage through its walls is determined by three factors, which are: the total amount of the exterior surface of the box; second, the thickness and nature of the insulation; and third, the difference in temperature between the interior and the exterior. In computing the surface of the refrigerator the entire exterior should be considered and the result expressed in square feet. When the doors of the box are of glass, or where different sections of the box are insulated differently, the surface of the different portions should be treated separately. When glass doors are being considered, it is common to consider the entire area of the door as being of glass, rather than

to make a separate computation for the frame. In formulae which will follow, area will be represented by the capital letter "A."

Having determined the area of the refrigerator, it is next necessary to determine the thickness and nature of its insulation. This may be done either by direct investigation or by reference to the manufacturer's specifications. The latter is probably the more used method, but if it is used in connection with boxes which have been long in service, it should be supplemented by sufficient investigation to disclose whether the insulation has deteriorated as a result of its service. Should investigation prove that it has, certain allowance should be made. When the structure of the wall is determined, a tabulation of the various layers of material and their thickness should be made.

### Thermal Resistance

In analyzing the passage of heat through the wall of a refrigerator it has been found that not only does the insulating material itself resist the passage of the heat, but also wherever there is a surface upon which air may collect there is an air film formed which also acts as a heat resistance. Before being able to calculate the amount of heat which will pass through the wall, it is therefore necessary to know the heat resisting value of the various materials of which it is composed. Measurements have been made of these values and they appear in the tables which follow. The thermal resistance, as given, is expressed as the number of degrees (Fahrenheit) difference in temperature between two sides of one square foot of the substance, one inch thick, necessary to force one B. T. U. through it per hour. The total thermal resistance of the wall is the sum of the thermal resistance of its various parts. Thermal resistance will be referred to as "R."

### Thermal Resistance of Various Materials

Material	R
Asbestos	3.46
Asphalted Felt	1.43
Asphalt Roofing	1.43
Balsam Wool	2.75
Balsa Wood—	
Light treated	2.90
Medium untreated	2.61
Beaver Board	1.03
Brick Wall	.25
Calorex	4.53
Celotex	3.03
Charcoal—	
Board	2.35
Loose	2.75
Concrete	.20
Corkboard	3.29
With Bituminous binder	2.86
Cornell Board	2.00
Felt—	
Asphalted	1.43
Fire	1.65
Hair	4.05
Polar (Flaxinum)	4.04
Wool	2.75
Hollow Tile Wall	.25
Kapok	4.21
Linoleum	.80
Masonry	.20
Mineral Wool	3.38
Paper	2.50
Stone	.10
Strawboard	1.04
Upson Board	3.03
Wood (and Sawdust)	1.00
Wood Felt	2.75
Zenitherm	2.00

Note: "R" for each thickness of refrigerator paper is usually taken as .08.

### Surface Resistance

Brickwork and Masonry	.73
Charcoal	.71
Concrete	.78
Corkboard	.73
Felt	.78
Glass	.60
Metals	.77
Paper	.78
Plaster of Paris	.78
Porcelain	.83
Wood	.73

Since thermal resistance is expressed as the number of degrees temperature difference necessary to cause one B. T. U. per hour to pass through one square foot of insulation, it is easy to calculate from it the amount of heat which will pass through the insulation per 24 hours by reason of a latter value is known as the Transmittance one degree temperature difference. This and is found by dividing 1 by the resistance and then multiplying by 24, that is:

$$\text{Transmittance} = U = \frac{1}{R} \times 24.$$

As indicated, Transmittance is represented by U and is the number of B. T. U. per 24 hours which will pass through one square foot of the insulation per degree difference in temperature. This definition should be memorized. In working problems, the total Thermal Resistance of the wall should be found, and then converted into terms of Transmittance as shown.

### Temperatures

Since the amount of heat which will pass through the walls of the refrigerator is a function of the difference in temperature between the inside and outside of the box, it is necessary for the engineer to determine these two temperatures. The temperature which should be maintained within the box depends upon the nature of the products which are to be stored. Most authorities agree upon the following for the commercial refrigerator:

Meats	38 to 40° F.
Dairy products and groceries	40 to 45° F.
Flowers	45 to 50° F.

The outside temperature is the temperature of the room in which the refrigerator is placed, and in this connection it is to be remembered that the highest temperature encountered in the room and not the average temperature must be used. To aid in arriving at this temperature, when other and more definite information is not available, the entire United States has been divided into three sections and the temperature to be used for each group specified. As mentioned, however, these temperatures should be used only when the engineer does not possess other and more definite information.

### Outside Temperatures

Maximum temperature not over:

80° for	
Northern Section	Maine
Washington	Vermont
Idaho	New Hampshire
Montana	Massachusetts
Wyoming	Rhode Island
North Dakota	Connecticut
Minnesota	New York
Wisconsin	Oregon
Michigan	Canada
90° for	
Central Section	Ohio
*North California	Virginia
*Central and North	Maryland
Nevada	Pennsylvania
Colorado, Kansas	New Jersey
Nebraska	Utah
Iowa	South Dakota
Missouri, Illinois	Delaware
Indiana, Kentucky	West Virginia
100° for	
Southern Section	North Carolina
*South California	South Carolina
*South Nevada	Delaware
Arizona	Louisiana
Texas	Alabama
Arkansas	Florida
Mississippi	New Mexico
Tennessee	Oklahoma
Georgia	

\* (37th parallel is dividing line.)

### The Service Factor

The amount of heat which enters the refrigerator by way of opened doors and by way of warm articles placed in it for cooling is usually determined by multiplying the amount which leaks through the walls by what is called a Service Factor. This factor has been determined by experience and observation and depends upon the class of service to which the box is subjected. In calculations this factor will be referred to as "S," and for the four important classes of boxes has the following values:

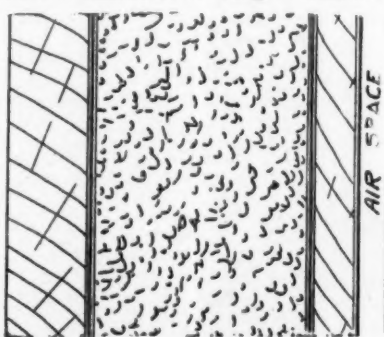
Type of Service	Service Factor
Florist	1.6
Market Coolers	1.7
Grocery	2.0
Restaurant (short order)	2.1

Knowing the values of A, U, T and S, for the box in question, the total amount of heat which must be removed from it per 24 hours is found by multiplying them together, thus:

$$H = A \times U \times T \times S$$

### A Sample Problem

The explanation of how to determine the refrigerating load of a box as it has just been given, should enable the student to readily solve such a problem, but, in order to make the solution still more clear, a sample problem will be worked. Let it therefore be required to determine the amount of refrigeration required by a grocer's refrigerator whose exterior dimensions are six feet six inches high, five feet wide, and three feet deep. Let it be further assumed that it has four doors, each 21 by 27 inches, and that two of these doors are of glass, there being three panes of glass—each separated by an air space in each. For the purpose of this problem the insulation and construction of the box shall be considered as being as follows:



Section of Wall

3/4" Wood	3/8" Wood
1 Sheet Paper	1/32" Asphalted Felt
2" Corkboard	3/4" Air Space
1 Sheet Paper	Metal Lining

Having determined the nature of the insulation, the next thing to do is to tabulate the thermal resistances of the various components, remembering that exposed

## General Electric Man to Manage Iowa-Nebraska Distributorship at Omaha



Thomas Doran

The Storz General Electric Refrigeration Company has been organized to handle the General Electric refrigerator in Omaha, Neb. The company is made up of the same people who compose the Storz Western Supply Company. Louis H. Storz is president of the new concern, and Thomas Doran, who has been with the General Electric Company for fourteen years, will manage the enterprise.

The company will be sales agents for all of Nebraska and sixteen counties in west-

ern Iowa. Agencies will be established rapidly throughout this territory. In fact, the Clark Electric Co., Norfolk; Pierce Electric Co., Pierce; Chet Grau, David City, are now established selling agencies for the Storz General Electric. Several others have been secured. Applications are now on hand sufficient to cover the entire territory.

Mr. Storz was more than pleased with results obtained so far. The daily papers and personal letters are the principal advertising methods used. Mr. Storz feels positive the new organization will be able to make great headway this season as he has found the people already acknowledge the superiority of electric refrigeration over the icing method. Several residence apartments carrying ten and more suites have been completely fitted with the General Electric refrigerators. He is also well pleased with the way the sales show in the country towns.

Strange to say there is a good market in the smaller towns for electric refrigeration. The farmers of the state are taking to this method. Many of them now have the electric farm lighting plant and use that for operating the refrigerator. It works well and gives the farm people better advantages than many of the city folks now enjoy. Mr. Storz is of the opinion ice will always be used to a certain extent, but electric refrigeration will soon be a rather common thing.

Both Mr. Storz and Mr. Doran have had much sales experience and will push the General Electric refrigeration to the limit in the territory secured.

surfaces also act as resistances. This is done so as to determine the total thermal resistance. Remembering that the thermal resistances given in the table are for a thickness of one inch, we have the following:

Wall	Insulation	R
	Outside wood surface	.73
3/4" Wood	3/4" Wood	.75
1 Sheet paper	1 Sheet paper	.08
2" Corkboard	2" Corkboard	6.58
1 Sheet paper	1 Sheet paper	.08
3/8" Wood	3/8" Wood	.37
1/32" Asphalted felt	1/32" Asphalted felt	.04
3/4" Air space	3/4" Air space	.78
	Felt surface	.75
	Metal surface	.77
Metal lining	Metal lining	.0
	Inside metal surface	.77
		10.95

The Transmittance should now be found, and in this case it is:

$$U = \text{Transmittance} = \frac{1}{10.95} \times 24 = 2.19 \text{ B.T.U. Per 24 hrs.}$$

The glass doors should next be treated in the same way, and since only the film of air on the six surfaces of the glass, and not the glass itself, is considered as having heat resistance, R for the glass doors is

$$6 \times .60 = 3.6, \text{ and } U = 6.66 \text{ B. T. U. per 24 hours.}$$

The total area of the box must now be found, remembering to segregate the glass surface from the rest of the insulation. Computing it, we find:

$$\text{Regular insulation} \dots 126.1 \text{ sq. ft.}$$

$$\text{Glass} \dots \dots \dots 7.9 \text{ sq. ft.}$$

Since this box is a grocery box which may be used also for small quantities of meat, its temperature should therefore be 40°. Assuming that it is located in a territory where the maximum temperature is 90°, the temperature difference T between the inside and outside is therefore 50°. Since it is a grocery box its service factor S is 2. From this information, the heat leakage can now be calculated using the formula:

$$H = A \times U \times T \times S$$

The heat leakage through the regular insulation per 24 hours is therefore:

$$H_1 = 2.19 \times 126.1 \times 50 \times 2 = 27,616 \text{ B.T.U.}$$

Through the two glass doors it is:

$$H_2 = 6.66 \times 7.9 \times 50 \times 2 = 5,267 \text{ B.T.U.}$$

The total amount of heat required per day is therefore  $H_1 + H_2$ , or 32,883 B. T. U.

## LEONARD E. ROLLINS, M.E.

DETROIT, MICH.

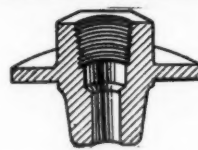
(Member Am. Soc. Ref. Eng.)

General Consulting Service—Tests Witnessed and Certified Reports for Investors and Bankers. Patent advice and suggestions.

Write for prices of condenser coils formed to your specifications.

WOLVERINE TUBE COMPANY  
1431 Central Ave., Detroit, Mich.

**WOLVERINE**  
STAINLESS COPPER AND BRASS TUBING



## Hot Die Pressed Forgings

Valve bodies, tees, elbows, evaporator headers, anything in the line of brass parts made to your specifications. Rough forgings only. The largest producers of refrigerator forgings in the country.

Send your specifications direct to:

ROME MANUFACTURING COMPANY, Rome, N. Y.  
Factory Representatives, F. B. Riley and Associates, 320 Beaubien St., Detroit, Mich.

## THERMOSTATS

SHAFT SEALS—FLOATS

HIGH PRESSURE

CUT-OUTS

GOODNOW & BLAKE MFG. CO.

LIGHT STAMPINGS

Automatic Controls for Refrigeration and Oil Burners

Engineering Department at Your Service

3840 BEAVER STREET

DETROIT, MICH.

## BRINE TANKS—"AIR WAY" CONDENSERS LIQUID FILTERS—EXPANSION VALVES

For Electric Refrigeration—Write Today

Factory Representatives:  
F. B. Riley and Associates  
320 Beaubien Street  
Detroit, Mich.

**Fedders Mfg. Co.**

Buffalo  
New York

## AUTOMATIC ELECTRIC CONTROLS NON-DETERIORATING MERCURY SWITCHES

Simple—Dependable—Accurate

**ABSOLUTE**  
ELKHART

**CON-TAC-TOR**

**CORPORATION**  
INDIANA

## FLINTLOCK CONDENSERS

Efficient—Economical—Compact

Give Greater Efficiency at Less Cost

Write for our Booklet

**FLINTLOCK CORPORATION**

4461 Jefferson Ave.

DETROIT, MICH.



## Portland Refrigerating Interests Cooperate in Educational Campaign

**5 Electric Refrigeration Dealers, 11 Ice Manufacturers and Distributors, 9 Furniture Stores, 2 Power Companies, 2 Department Stores, 9 Dairies, 7 Box Manufacturers, and One Gas Company Combine to Sell Idea.**

Forty-six firms in Portland, Oregon, members of the Refrigeration Trades Association, pooled their resources and efforts in a ten-day educational campaign, which stands out as the most aggressive and successful co-operative movement during the past summer.

About 250 banners carrying the slogan, "Protect Your Food and Health with Refrigeration," were placed on the delivery trucks of the different companies, about 400 poster cards were displayed in the windows and stores, street car card advertising was furnished by the Portland Electric Power Company, 26,000 stickers were attached to the bills of the Northwestern Electric Company, and extra newspaper advertising by the participating firms featured refrigeration service.

A series of talks was given by state and city health authorities, and by domestic science teachers from the University of Oregon and the Oregon Agricultural College. These talks were delivered before twenty-eight organizations and to a total of 3,200 women.

Short courses in food preservation were also given at high schools, and three lectures were broadcast over the radio.

Commenting upon the intelligence and constructive effort displayed in the campaign, *Electrical West* discusses the movement in an editorial as follows:

### Portland's Educational Campaign on Refrigeration

"It is a real pleasure to record the spirit of co-operation evidenced by the refrigeration interests in Portland in their recent ten-day educational campaign, in which the slogan, 'Protect Your Food and Health with Refrigeration,' was broadcast. No ordinary campaign, this, joined by a few firms selling mechanical refrigeration, but a distinctly major effort participated in by nearly 100 per cent of the refrigeration interests of the city who, recognizing that ice and ice boxes, gas-heated absorption machines and electrically driven mechanical plants all have their economic place in the refrigeration picture, resolved to attempt to put across the idea that refrigeration is a necessary adjunct to proper, modern house-keeping. With all, then, concentrating on this fundamental concept as a basis, and the minds of its citizens opened to more specific conviction, each firm proceeded to put forward its own idea as to how best such refrigeration could be provided, whether by ice or by some of the more modern methods.

"Portland's educational campaign on refrigeration was fostered and promoted by the Refrigeration Trades Association of that city, originally formed by the dealers in mechanical plants, but later expanded to include dealers handling products having a connection with any sort of refrigeration. The imposing list of the participants in the campaign, classified as to the nature of their businesses, was summarized as follows: nine furniture houses, two department stores, five mechanical refrigeration agents, nine dairies, two power companies, eleven ice manufacturers and distributors, one gas company, and seven ice box manufacturers' agents. Obviously with this array of backers, including as it did some of Portland's very largest business establishments, editorial co-operation of the newspapers was comparatively simple to obtain. In the hands of a publicity expert, a woman, this phase of the campaign was carried out with admirable effect.

"Talks before women's clubs and community clubs were arranged, and domestic science editors of all the papers devoted many columns to the place of refrigeration in the scientific care and preparation of food to safeguard the health of the community. Is it any wonder then that a great impetus was given to the sale of all kinds of devices designed to give refrigeration service, and that the ice box dealer, the ice manufacturer and the mechanical refrigeration dealer had the opportunity of their lives to display their wares under extremely favorable conditions?

"The concept that the Portland refrigeration trades have of the situation is simple. It is based on the fact that only a small percentage of the homemakers of the city is sold on the necessity of any sort of refrigeration, and that rather than confine operations to fighting for this small percentage of the possible total business, it is better to attempt by education to widen the field of prospects. In this concept is included also an understanding of the fact that people's tastes and incomes vary from year to year; that just as a man goes by carefully graduated steps from Chevrolet to Buick to Cadillac, so likewise can he be educated to go from cold cupboard to ice box to mechanical refrigeration, and that in the transition dealers in the whole wide range of refrigerators and refrigeration methods have the opportunity to profit.

"What a refreshing and cheerful picture this makes in comparison with the jealous bickering within the refrigeration trades in some other communities where the mechanical refrigeration fellows revile the iceman, and the iceman fights back in

kind, and where the central station, standing as a buffer between the two, receives the curses of both! Who shall say that Portland's way of promoting the refrigeration business is not the best way for everybody concerned, the most productive of profits to those in the business, and the most admirable from the standpoint of making refrigeration a factor in the welfare of the community?"

### Fond du Lac Distributor for Zerozone Moves to Larger Quarters

The Home Utilities Company, Fond du Lac, Wis., distributors of Zerozone electric refrigerators, have moved from 19 East First Street to 107 South Main Street. The new quarters provide offices and dis-

play rooms for the concern, of which L. W. Stevens is manager. The move to improved quarters marks the beginning of the company's second year of service.

### Make 'Em Subscribe

"Will you please send us another copy of your last issue? Whether or not the writer ever sees your paper, depends entirely on whether I happen to be here when the mail comes in. Otherwise, it disappears instantly on arrival."—H. J. Hellbruck, sales manager, Pure Cork Products Company, Inc., Philadelphia, Pa.

### Marvelous Little Paper

"I receive *ELECTRIC REFRIGERATION NEWS* regularly and wish to congratulate you on the progress you have made. It is a marvelous little paper and full of good live information. I take several other magazines but the *News* is the only one I have time to read. I am going to insist upon every employee in my factory subscribing for it."—R. M. Burdick, American Engine and Airplane Company, Los Angeles, California.

Slowly science prolongs life and thus enables you to buy a few more things on the installment plan.

—Robert Quillen.

## Crystal and White Steel

### APARTMENT REFRIGERATORS

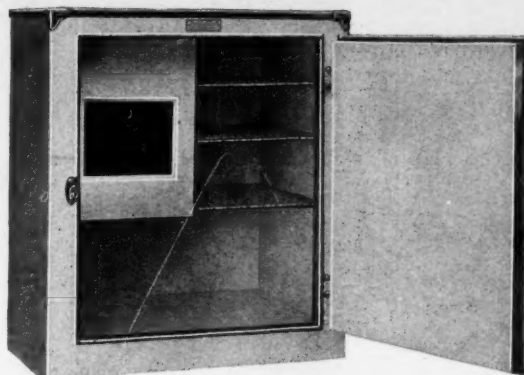
for Remote Installations

Are going into apartment homes all over the country

Apartment house multiple hook-ups require an efficient cork insulated refrigerator, like the "Crystal" or "White Steel."

In a recent test of our No. 652 connected with a Universal machine a uniform temperature of 45° was maintained with the outside temperature ranging from 75° to 90° and with machine operating only one-third time.

Sizes up to 20 cu. ft. for self-contained units and remote installations. Prompt service on special sizes. Send sketch or blue-print.



No. 652

Write for catalog and prices and sample wall section showing pure cork insulation.

**CRYSTAL REFRIGERATOR CO., Fremont, Nebr.**  
MAKERS OF STEEL REFRIGERATORS SINCE 1910

## Two More "Sealtite" Models

### Kelvinator Scores Again!

**E**ARLY in January the "Sealtite" Cabinet Kelvinator was introduced. Pioneer in domestic electric refrigeration, Kelvinator pioneered again with a cabinet which brought electric refrigeration to every home.

Now, there are two new "Sealtites."

All three models are built to last a lifetime. Each is built of steel with 2 inch insulation of corkboard. All exterior hardware is of triple nickel plated brass. There is no possibility of warping and cracking, even in the most trying climate.

They are easy to move about—require little floor space—fit in anywhere—easy to clean.

A convenient finance plan of deferred monthly payment is available through the Refrigeration Discount Corporation by which you can enjoy Kelvinator immediately.

Model 272, introduced first, is finished in gray lacquer with interior of white enamel on pure rust proof iron. It has 7 sq. ft. of shelf space—ample for the small home or apartment.

Model 273 is identical in size and shelf space with Model 272. It is finished in



Model 298

snow white lacquer, with interior lining of porcelain on rust proof iron.

Model 298, shown here, is larger than the other two "Sealtites" and has a shelf space of 9 1/3 sq. ft. It was developed to meet the needs of those who wanted a larger model of the same construction. Its exterior is of snow white lacquer and the interior is lined with porcelain.

Models 272 and 273 have 2 freezing trays in which 30 cubes of ice can be frozen at one time. Model 298 has 3 trays in which 45 cubes of ice can be frozen at one time.

# Kelvinator

Oldest Domestic Electric Refrigeration

12354 PLYMOUTH ROAD, DETROIT, MICH.

Better  
Always Better



## NEW BOOKLET AND LEAFLETS

### Iroquois

The Iroquois Electric Refrigeration Co. has issued an attractive booklet in colors, entitled "New and Dainty Recipes." It contains an article by Lily Haxworth Wallace on "How Iroquois Electric Refrigeration Serves You"; recipes for tempting dishes and desserts; with a description of the different models manufactured.

### Superior

We have received a folder from Superior Iceless Refrigeration, Inc., Canton, Ohio, entitled "Everlasting," which contains cuts of two models of Bohn refrigerator cabinets equipped with Superior refrigeration units. Specifications of six different models are also given.

### Mechana-Kold

An interesting folder has been issued by the Mechana-Kold Corporation, Bay Shore, N. Y., describing three models of their electric refrigerator and giving detailed sketches of freezing tanks. Five questions and answers featured in this folder go far in explaining the merits of the machine.

### Mueller Brass Craftsman

The Mueller Brass Co., Port Huron, Michigan, have sent us a copy of their house organ, *Mueller Brass Craftsman*. This 24-page booklet contains news items and events of interest within the organization.

### Calvert

The Poole Engineering & Machine Co., Baltimore, Md., manufacturers of the Calvert electric refrigerator, have published a booklet entitled, "The Highest-Priced Electric Refrigerator in America and the Most Economical." It contains a panoramic view of the Poole Engineering & Machine Company's plant, and photographs of ten models of the Calvert refrigerator. A number of paragraphs are devoted to the mechanism, refrigerant, compressor, cooling unit, pressurestat, etc. Salad and dessert recipes, also given in this booklet, make it doubly attractive.

### Cold Storage News Letter

The Dairy and Cold Storage Branch of the Department of Agriculture, Dominion of Canada, publishes a monthly "Cold Storage News Letter." The July issue consists mainly of excerpts from published articles on the cold storage of canned fruit, development in refrigeration transport, refrigeration benefits to fishing, the testing of household refrigerators and other discussions of the subject. The letter is issued by J. A. Ruddick, Commissioner, Ottawa, Canada.

## REQUESTS FOR INFORMATION

The following inquiries have been received by *ELECTRIC REFRIGERATION NEWS*. Readers who can supply information on these subjects are invited to write at once, referring to the Query number.

**Query No. 35**—"Can you assist me in locating a manufacturer or jobber who could supply me with 'an electric pressure packer; a container for cold packing done by electricity; eight-jar size?'"

**Query No. 36**—"Can you put us in touch with a manufacturer of a mechanical cube ice freezing unit by gas? We believe there is such a unit of foreign manufacture; however, we were wondering whether there is one of domestic make. The capacity is approximately 24 pounds. Any information you may give us along these lines will be very much appreciated. If you are acquainted with the German machine, will you please let us know who their representatives are in this country?"

**Note:** This offer expires September 15, 1927. After that date subscription rates will be \$1.25 per year, two years for \$2.00. Act quickly to take advantage of the low rate.

## Subscription Order

BUSINESS NEWS PUBLISHING CO.  
554 MACCABEES BLDG.  
DETROIT, MICH.

DATE.....

Please enter my subscription to *ELECTRIC REFRIGERATION NEWS*, the Business Newspaper of the Electric Refrigeration Industry.

United States: ☐ \$1.00 per year ☐ Three years for \$2.00.  
Foreign Countries: ☐ \$1.50 per year.

I am enclosing payment in the form of

☐ Check ☐ P. O. Order ☐ Cash ☐ Stamps

Name .....

Company .....

Street Address .....

City and State .....

☐ **NOTE:** If it is inconvenient for you to enclose payment with this order, check this square and invoice will be mailed. Do it now, while you have the blank before you. It will save the time and trouble of writing a letter and you will be sure to get the next issue.

## Milwaukee Department Store Displays Electric Refrigerators in Beautiful Corner Window



One of the finest electric refrigeration displays ever seen in Milwaukee was put on for four days recently by the Boston Store, at Third street and Wisconsin avenue. Results from the display put to flight a lot of talk in this city that a department store is not the place to sell electric refrigerators.

It has been said that the principal reason department stores have not heretofore achieved large sales in the electric refrigeration field is that they do not push the line enough. It is also claimed that many managers seem to think that electric refrigerators just have to be stocked and that they sell themselves. They appear to forget that electric refrigeration is a new service, and therefore must be explained and brought before the public a little more prominently than the older equipment for the home.

The Boston Store is a sub-dealer of the Electric Refrigeration Company, General

Electric distributors for a number of Wisconsin counties, and the firm has only had the line for a short time.

In accordance with its usual merchandising policy, the Boston Store adopted unique methods of putting over electric refrigeration. If you were to go into the store today you will find the electric refrigeration department in one place; next day, you will find it in another place. By shifting the department around in this way they are impressing electric refrigeration upon people of all classes. If the department remained in one spot, only a limited number would visit it.

Right after the Boston Store installed the General Electric, E. Merritt, of the Electrical Refrigerator Co., went in and helped start the sales campaign. A number of fine window displays were decided upon. The Boston Store has just completed the remodeling of its windows, and they now present an example of what

money and artistry together can do.

Three refrigerators were placed at various angles in the large corner window. The background was made up of a fine wall effect, a few chairs, palms and ferns. The door of the middle refrigerator was left wide open and in it articles of food were displayed. Only one sign displayed in the entire exhibit—a small one, placed beside the open refrigerator, giving the name and the salient points about it.

According to Mr. Merritt of the Electric Refrigerator Company, and Mr. Gillys of the display department of the Boston Store, the crowds that viewed the display formed a jam in front of the window and it became necessary to open a pathway for the pedestrians. The Boston Store is planning to push the line very hard during the coming year, and if they continue with their present methods there is nothing that can stop them from attaining a very enviable sales record.

### Hartford Distributor Active in Apartment Field

The Kelvinator-Lathrop Co., 436 Asylum Street, Hartford, Conn., has recently completed the installation of electric refrigeration in the Sacker apartment house on Edgewood Street. The company is estimating on several other large apartment projects for the installation of Kelvinator refrigerators.

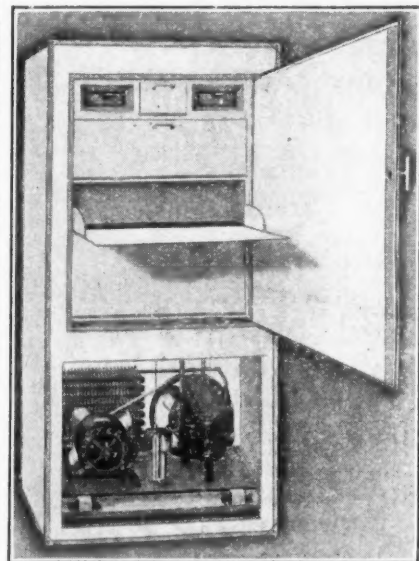
### Kansas City Electrical Jobbers Merge

The Mid-West Electric Co., of Omaha, and the B-R Electric Co., Kansas City, have merged their interests with the General Electric and become integral parts of that concern. G. K. West, treasurer of the Mid-West, is retained by the General Electric in the same capacity at Omaha. A. H. Luebe is vice-president and general manager of the Omaha house.

### A Wasted Life

George: "A man died the other day who was 117 years old."  
Amy: "Gracious. Just think of all the things he could have bought on the installment plan!"—Cyril Pittman.

## UNUSUAL FEATURES IN NEW MACHINE



The American Engine and Airplane Company, Los Angeles, Calif., will shortly place on the market a new machine to be known as the "Ice Queen," which has a number of unusual features. The name of the company, it is reported, will be changed to the Refrigeration Company of America, and large production in a new factory will begin shortly.

The top compartment of the cabinet has ice cube trays on each side, with a center portion for freezing desserts or storing extra cubes. The food compartment has a false front, which prevents cold air from rushing out when the large door is open. As will be noted in the illustration above, each shelf has a separate door opening into that particular compartment. The main door is mounted on piano hinges instead of the conventional type, and the doorlatch is also of a new design.

The compressor is a three-cylinder type, which is said to reduce starting torque. It has no rings, connecting rods, pins, or eccentric straps. The thermostat has only one moving part and the expansion valve does not require syphon or diaphragms. The manufacturer claims that the new features of the cabinet are well covered with patents.

### How to Take Care of Motor Insulation

"The Care of Motor Insulation" is the title of an informative article which appears in the August issue of *General Electric Review*. The relation of lubrication to insulation, proper storage conditions, several methods of drying out, importance of resistance tests, etc., are subjects carefully covered in this article.

## COLD HELPS MAKE WORLD'S QUICKEST PICTURES POSSIBLE

Stepping into a "telephone booth," dropping a quarter in a slot and receiving almost at once a strip of eight good photographs of oneself—made, developed, printed and delivered with a click, all within eight minutes and without the touch of a single human hand—has begun to grow popular on Broadway in New York and in a few other cities. The new photomaton, as a business machine, is making its way. But it has just come to light that this remarkable machine could not work without electric refrigeration like that used in households to protect food and freeze desserts.

The patron merely sits down inside the booth, drops in his quarter and, as the strong light comes on, the shutter in front of him begins clicking off the poses. At the eighth click the light snaps off. But the procedure is just starting. The strip of film that carries the eight exposures is running on through the mechanism inside the "booth" to produce the fastest photographs on record. Cold is essential in the process.

Every chemical reaction works best at some one temperature, or within a very narrow temperature range. This is particularly true in developing pictures.

The necessity for keeping the solutions cold applies equally to the photomaton. Each one of the nine baths through which the pictures pass before they are returned to the customer, must be kept at a certain low temperature. If the solutions get too hot, the gelatine coating on the film melts and the developing solutions over-develop. On the other hand, if they grow too cold, the pictures will be under-developed.

To control the temperature of these solutions, the photomaton employs not ice, but cooling coils similar to those in the cooling compartment of a household electric refrigerator, regulated by a device very similar to that which regulates the temperature of a refrigerator. These coils are located in the nine baths and washes, automatically controlling the temperature and keeping it exactly right regardless of weather.

**NORTHEY**  
**REFRIGERATORS**  
FOR ALL PURPOSES  
ANY SIZE, STYLE OR FINISH  
**NORTHEY MFG. CO.**  
WATERLOO, IOWA  
AGENCIES IN MOST LARGE CITIES

## CLASSIFIED COLUMN

Note: Replies to advertisements with "box numbers" should be addressed to Electric Refrigeration News, 554 Maccabees Bldg., Detroit, Michigan.  
Advertising rates for this column only: Positions wanted 40 cents per line for one insertion, \$1.00 per line for three insertions. All other classifications, 50 cents per line for one insertion, \$1.25 per line for three insertions.

### REFRIGERATION ENGINEER WANTED:

A thoroughly capable man who has had experience in the designing department of one of the two or three successful electrical refrigerators, may obtain a responsible position with a nationally known firm having every facility, including capital, factory and sales organization to successfully manufacture and market an electrical refrigerator. Company is building a machine at the present time. Applicant must be able to either correct faults in the present machine or design a new one and have it ready for production in ninety days. Good position for right man. Give reference in first letter. Address Box 47.

**SALES EXECUTIVE AVAILABLE:** Qualified by twelve years' experience to develop, inspire and lead any sales force. Proven ability as a personal producer and closer. Average annual income during past ten years has exceeded \$7,500. Complete knowledge of Mechanical Refrigeration sales problems. Connection desired with substantial Eastern manufacturer or distributor of Domestic and Commercial ice machine who is interested in intensive sales development. Straight commission or salary and bonus only. Box 46.

**AEX**  
REX MANUFACTURING CO.  
CONNEVILLE, IND. U.S.A.

**Distinctive  
Refrigeration  
Hardware**  
PATENTED TRIPLOCK  
Winters & Crampton Mfg. Co., Grand Rapids, Mich.

**Copeland**  
DEPENDABLE  
Electric  
REFRIGERATION  
630 Lyncaster Avenue, Detroit, Michigan

**BUSH CONDENSERS**  
Made in any size or capacity.  
Seamless Copper Tubes, Individual Fins, Maximum Efficiency.  
**BUSH MFG. CO.**  
Hartford, Conn.  
**WHITE-HANNA**  
302 Lincoln Bldg.,  
DETROIT, MICHIGAN

**BANTA**  
Display Counters and  
Commercial Refrigerators  
Made Special for  
**ELECTRIC REFRIGERATION  
REFRIGERATORS**  
CLEARFIELD, PA.

**ELECTRIC REFRIGERATION  
DISTRIBUTORS AND DEALERS**  
You need the **PEERLESS** line of commercial units.  
**PEERLESS** units give you a COMPLETE line, ranging from 1 to 10 tons.  
Fifteen years of successful manufacturing and merchandising of ice machines are behind the **PEERLESS** name. Our record warrants your most exacting investigation.  
**WRITE OR WIRE**  
**PEERLESS ICE MACHINE CO.**  
503-531 S. Jefferson St.  
CHICAGO, ILL.